

*Dr. Clef*

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IN THE UNITED STATES DISTRICT COURT FOR THE  
WESTERN DISTRICT OF MISSOURI  
WESTERN DIVISION

JOHN T. ROSS,

Plaintiff,

-vs-

No. 9494

PHILIP MORRIS COMPANY, LTD.,  
a corporation,

Defendant.

TRANSCRIPT OF PROCEEDINGS

July 2, 1962

Volume 9

2018027928

BERYL L. FINLEY

OFFICIAL COURT REPORTER, DIVISION NO. 2

UNITED STATES DISTRICT COURT

KANSAS CITY 6, MO.

430 U. S. COURTS BLDG.

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**I N D E X**

<b>PLAINTIFF RESTS</b>	<b>Page 1498</b>
DEFENDANT'S MOTION FOR DIRECTED VERDICT AT THE CLOSE OF PLAINTIFF'S EVIDENCE	1498
DEFENDANT'S CASE	1500
Witness:	Direct   Cross   Redirect   Recross
Dr. Louis H. Clerf	1500   1568   1708   1750
	<u>Marked</u>
Defendant's Exhibit R	1536
S	1536
T	1546
U	1555
Plaintiff's Exhibit 54	1616
	<u>Received</u>
	1550
	1538
	1546
	1556
	1619
	<u>Refused</u>

2018022929

MORNING SESSION, MONDAY, JULY 2, 1962

THE COURT: Does the plaintiff rest?

MR. FIELD: Yes, the plaintiff rests, Your Honor.

(At the close of plaintiff's case in chief, the defendant filed the following motion:)

DEFENDANT'S MOTION FOR A DIRECTED VERDICT  
AT THE CLOSE OF PLAINTIFF'S EVIDENCE

Comes now defendant, PHILIP MORRIS & COMPANY, LTD., INCORPORATED, in the above-entitled cause at the close of plaintiff's evidence, and moves the Court to direct a verdict in favor of defendant as to both Count I and Count II of plaintiff's Third Amended Complaint and to each of such counts for the following reasons:

1. The evidence failed to establish a claim against defendant upon which relief can be granted against the defendant.

2. The evidence failed to establish that the defendant was negligent in any of the particulars alleged in plaintiff's Third Amended Complaint.

3. The evidence failed to establish any basis for relief in implied warranty, as alleged in plaintiff's Third Amended Complaint.

4. The evidence failed to establish that

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defendant's product caused or contributed to cause any injury or damage to the plaintiff.

5. The evidence established that the plaintiff was contributorily negligent as a matter of law.

6. Plaintiff assumed and incurred any risk involved in the use of defendant's product.

7. The evidence established that any claim of plaintiff was barred by the applicable statutes of limitation.

DAVID R. HARDY  
915 Grand Avenue  
Kansas City 6, Missouri  
Baltimore 1-3611

CARL E. ENGGAS  
1500 Home Savings Bldg.  
Kansas City 6, Missouri  
Victor 2-3132

Attorneys for Defendant

Which motion was by the Court overruled.

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DEFENDANT'S CASELOUIS H. CLERF,

called as a witness on behalf of the defendant, was duly sworn and testified as follows:

## DIRECT EXAMINATION

BY MR. HARDY:

Q. Will you state your name, please, sir.

A. Louis H. Clerf, C-l-e-r-f.

Q. Now, Doctor, you are going to have to speak loudly enough that, with this high ceiling, the last man on the jury can hear you. So speak as loudly as you can-- well, maybe not as loudly as you can, but loud enough to carry.

Where do you live, Doctor Clerf?

A. [DELETED]

Q. And what is your profession?

A. I am a retired physician.

Q. And what was your education?

A. My medical education?

Q. No, give us your whole education.

A. I received my preliminary education in the public schools of Ellensburg, Washington, continued my academic work in St. Martin's College, which is in Olympia, Washington. My first two years in medicine at the University of Oregon, in Portland, Oregon. I then transferred to the

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Jefferson Medical College, Philadelphia, and graduated in medicine in 1912. I then accepted an internship for two years in the Jefferson Medical College, which was followed by a chief residency of two years.

Q. What is a chief residency, Doctor?

A. In those days the chief resident was the senior resident who had charge of admissions of ward patients to the hospital, and he supervised the work of the interns and also did considerable emergency surgery, particularly at night.

Q. And where was that chief residency?

A. The Jefferson Medical College in Philadelphia.

Q. And did you have any residency training at any other hospitals?

A. I secured some training at the New York Eye and Ear Infirmary, and at the New York Throat and Lung Hospital, during 1919.

Q. Now, does that conclude your formal education?

A. Yes.

Q. Would you tell the jury, please, Doctor, what degrees, scholastic degrees, do you hold?

A. I hold a degree of Doctor of Medicine.

Q. And when did you first secure or when did you secure the degree of Doctor of Medicine?

A. 1912.

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- Q. And from 1912 until what date did you practice?
- A. Well, I practiced from 1912 until 1954.
- Q. And since that time, although not actively practicing, have you continued active in medical organizations and in medical work?
- A. Since my retirement in June 1954 I have done some consultation work. I still attend medical meetings locally and nationally and participate in the work of the Board of Examiners in Otolaryngology, of which I am a member.
- Q. Now, explain for the jury what is meant by otolaryngology.
- A. Otolaryngology is that branch of medicine that has to do with the ear, nose, throat, and my work was expanded in that I also did bronchoesophagology. That has to do with disturbances in the air and food passages, that tracheal-is, the esophagus and the bronchial tree.
- Q. Now, when you say it has to do with disturbances in the air and food passage, which one of the two has to do with disturbances in the air passage?
- A. That would be bronchoscopy or bronchology.
- Q. Explain to the jury what bronchoscopy is.
- A. The term bronchoscopy as now applied has to do with investigation, inspection of the trachea and the bronchi to both lungs.
- Q. The bronchi or the lungs?
- A. To the lungs, yes.

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- Q. And what is esophagoscopy?
- A. That has to do with the work of inspecting the interior of the esophagus, down to--of course in our case it included a part of the stomach.
- Q. And is the inspection of the air passage, bronchoscopy, the same or different than the inspection--strike that. Is the inspection of the air passage, bronchoscopy, an inspection of the same location or the same organs or different organs, a different system than esophagoscopy?
- A. Yes, sir, it is different.
- Q. It is different. All right. For clarity at this point, Doctor, in the inspection of the air passage, would you explain to the jury how you get your bronchoscope down into the lungs, the path that it takes?
- A. The bronchoscope is introduced through the mouth behind the base of the tongue, behind the epiglottis, between the vocal cords, into the trachea, and then you pass either into the right or the left bronchus and continuing onward you inspect the subdivisions of those two main trunks going to right or left lung.

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OR  
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- Q Now, I would like to ask you, Doctor, when you say you insert them through the cords --
- A (Interrupting) Between the cords --
- Q (Continuing) -- between the cords. Where are the cords located?
- A The vocal cords are in the cavity of the larynx.
- Q And after you go through the vocal cords or between the vocal cords, and you said you then go into the trachea?
- A Yes, sir.
- Q And what is that commonly known as in layman's language?
- A Windpipe.
- Q And after you go through the trachea is when you get to the lungs?
- A Yes, sir.
- Q All right. Now, is that what you would describe as the respiratory system or air passageway?
- A Yes, sir.
- Q Now, is the esophagus located in the air passageway?
- A No, sir.
- Q All right. Tell the jury how you go to get to the esophagus in esophagoscopy.
- A The tube is introduced, again, through the mouth, preferably along the right side. It is then passed beyond the base of the tongue into the right pyriform sinus, down to the upper opening or cricopharyngeal sphincter of the

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esophagus, just passed through this, and one enters the esophagus.

Q Let me ask you whether or not the esophagus or the pyriform fossa, either one, are parts of the respiratory system.

A No, sir.

Q What are they a part of?

A The food passageway to the stomach.

Q Is that food passageway called food passageway, or alimentary tract?

A Yes, identical.

Q Now, Doctor, going back to your background, would you please tell the jury, after you have gotten out of medical school -- did you say 1914?

A I finished my residency in '16.

Q You got your degree in '12?

A '12.

Q 1912. Now, after you got your degree in 1916 and up to the date of this trial, have you received any honorary degrees from institutions of learning?

A Yes, sir.

Q Would you please tell the jury what honorary degrees you have received and from what institutions.

A I received a degree of Doctor of Law in the latter part of the '30's from Villanova University, a Doctor of

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T2-s3

Science degree from St. Martin's College three years ago, and a degree of Doctor of Letters from St. Martin's -- from Jefferson Medical College in 1961.

Q Doctor of Letters from Jefferson Medical?

A Yes, sir.

Q Now, to clarify it for the jury panel, when you say you received a Doctor of Laws, that doesn't mean you are a doctor, does it? I mean it --

A (Interrupting) I am a doctor of law.

Q It doesn't mean you are a lawyer?

A But I am not permitted to practice law.

Q All right. Those are all three honorary degrees?

A Honorary degrees.

Q All right, sir.

A Merely that.

Q Now, Doctor, after you got out of your residency in 1916, tell the jury what you did professionally.

A I joined the Medical Corps of the Navy in October of 1916 and served in various hospitals, went to the A.E.F. with the U. S. Marines, returned from France in 1919, then went to New York City and took work in these two hospitals doing graduate work.

Q The two that you mentioned?

A Yes, sir.

Q All right.

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T2s4

- A I then went to the Naval Medical School and the Naval Hospitals in Washington and was placed in charge of the Division of Otolaryngology, where I remained until April 1922, when I resigned from the Medical Corps of the Navy.
- Q After you resigned from the Medical Corps of the Navy -- strike that. During the time that you were in the Medical Corps of the Navy, were you dealing with diseases of the ear, nose and throat?
- A During the last two and one-half years I was working in that field exclusively.
- Q All right. Now, what year are we up to now, Doctor?
- A '22.
- Q All right. What did you do in 1922?
- A After my resignation from the Navy, I became associated with Dr. Chevalier Jackson in Philadelphia.
- Q Were you one of Dr. Jackson's early students?
- A I was among his early assistants. I was No. 3 in order of those that he accepted in Philadelphia.
- Q Was it at Jefferson Medical College in Philadelphia that Dr. Chevalier Jackson was a professor?
- A Yes, sir.
- Q And when we talk of Dr. Chevalier Jackson, we are speaking of Dr. Chevalier Jackson, Sr., are we not?
- A Yes, sir.
- Q And in what year did you become associated with him as an

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T285

assistant at Jefferson Medical College?

A 1922.

Q How long did you -- Was that an assistant professorship or what do you call it?

A It began as an assistant, and I later was promoted to associate professor.

Q First assistant and then associate professor?

A Yes, sir.

Q How long were you assistant and then associate professor of Jefferson Medical College?

A I was with him in those capacities until June 1930.

Q And what were you instructing in?

A I was instructing in bronchoesophagology and laryngology.

Q Now I would like for you to tell the jury whether or not, at any time during your term with Jefferson Medical School, Dr. Chevalier Jackson resigned or withdrew from the staff or retired, or whatever happened.

A I'm sorry, I didn't quite get the beginning of that.

Q When did Dr. Jackson leave Jefferson Medical School?

A He retired by reason of age on June 30, 1930.

Q All right. Now tell the jury, at the time he retired was he the head of the Laryngology Department?

A He was the head of the Department of Laryngology and Bronchoesophagology at the Jefferson Medical College.

Q Now, please tell the jury who replaced him as head of the

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department.

A I did, sir.

Q All right. You replaced Dr. Jackson at what time?

A I went on duty July 1, 1930.

Q And for how long did you continue as the head of the Department of Laryngology, esophagology and bronch -- what?

A Bronchology.

Q Bronchology.

Q Bronchology? How long did you continue as the head of the department at this institution of learning?

A I continued there until June 30, 1954.

Q And during the time that you served as a professor and as head of the department, did you or did you not have anything to do with instruction of medical students with regard to the anatomy of the larynx, the esophagus, and areas within your specialty?

A Yes, sir.

Q And over what period of time did you instruct students at Jefferson Medical College in this specialty?

A Well, I really started shortly after coming in 1922, and then I assumed full responsibility for it from 1930 to 1954.

Q So that your full term there was about 32 years, from '22 to '54?

A Yes, sir.

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Q And you were head of the department from 1932 -- 1930 to 1954?

A Yes, sir.

Q And during all of that time that you were head of the department, did you instruct in the anatomy of this area?

A That was part of the course, yes, sir.

Q All right, sir. Now, during the time that you taught at Jefferson Medical College, could you estimate for the jury approximately how many doctors generally, general practitioners or otherwise, that you instructed who went out into the practice or into the teaching profession in medical schools? Just an approximation.

A Well, I can set it up this way. Our classes varied from about a hundred forty to a hundred fifty senior students, and it was a period of 32 years, so I would say about 4,000.

Q About 4,000?

A Approximately 4,000.

Q That you instructed?

A Yes, sir.

Q Now, would you tell the jury your best estimate of how many laryngology specialists that went out into the practice or as instructors you trained during the time, or assisted in training during the time, you were head of the department and associate professor?

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A During the 32 years I assisted Dr. Jackson, Sr., and later Dr. Jackson, Jr., in the training of men in the field of laryngology and bronchoesophagology, they gave, as a rule, four courses a year, and they tried to get about eight men per course. At times there were less than eight. Sometimes more. So that it would be, I would say, about 30 men a year, and, well, possibly 30 years. It would be close to eight or nine hundred, something like that.

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Q. Now, that is eight or nine hundred specialists in the area of the throat?

A. Yes, sir.

Q. Now, Doctor, during the time that you were head of the department and associate professor before that, at Jefferson Medical College, did you carry on any clinical or surgical practice?

A. Yes, sir.

Q. Would you tell the jury over what period of time you treated patients and had a clinical practice.

A. I treated patients from about '22 to '54.

Q. A 32-year period?

A. Yes, a 32-year period. But I had my own personal practice from '30 to '45.

Q. Where did you treat them before you had your own personal practice?

A. I was then associated with Dr. Jackson and I treated them in his office.

Q. Doctor, in your personal practice did you do surgery?

A. Yes, sir.

Q. All right, would you tell the jury what was your specialty and in what areas of the body did you do surgery?

A. I limited my practice to diseases of the larynx, pharynx and tracheal-bronchial tree. The limitations to the tracheal-bronchial tree were largely diagnostic

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in that I didn't do any chest surgery or esophageal surgery, but I did surgery in the larynx and pharynx and neck.

- Q. Now, could you give the jury some idea as to how many operations of the larynx you did during that period, just an estimate? I know you haven't counted them.
- A. Are you referring to major surgical procedures?
- Q. Major surgical procedures on the larynx alone.
- A. I did something slightly more than 1200 operations for malignant disease of the larynx, that is, cancer, and I removed or partially removed the larynx for benign lesions in possibly 40 or 50 cases, and I did plastic work on the larynx for postdiphtheritic stenosis, injury and that sort of thing.
- Q. What is that?
- A. That has to do with plastic work on the larynx to re-establish the airway. We don't see it so much now, but in the early days, postdiphtheritic stenosis was very common, and we had dozens of those cases, so I did plastic procedures in well over a hundred cases, possibly 150.
- Q. And what would be your total experience with regard to the larynx as such, that is, from the standpoint of operations?
- A. I must have carried out at least fifteen--fourteen or

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T-8w

fifteen hundred major surgical procedures.

Q. And let me ask you, Doctor, did you do surgery or treatment in the area of the pyriform fossa?

A. Yes, sir.

Q. Is that a part of the larynx?

A. That is morphologically a part of the digestive tract, but in our laryngeal surgery or our cancer surgery we obviously get into the pyriform sinus or fossa in order to remove the entire voicebox.

Q. Now, with regard to the--you say morphologically. For the benefit of the jury and for purposes of explaining about the pyriform fossa, is the pyriform fossa a part of the respiratory tract, such as the larynx?

A. I do not consider it such.

Q. Is the pyriform fossa considered by you to be a part of the larynx or is it a part of the food tract?

A. It is a part of the food tract.

Q. Now, Doctor, going back insofar as your background is concerned, would you tell the jury the medical groups or societies of which you are a member.

A. You want all of them?

Q. Well, just go ahead and give us some.

A. Well, I am a member of the Philadelphia County Medical Society, the Pennsylvania State Medical Society, the American Medical Association, the Philadelphia

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Laryngological Society, the College of Physicians of Philadelphia, the New York Laryngological Society and the New York Bronchoscopic Society.

- Q. Let me stop you a moment. The New York Laryngological Society and the Pennsylvania Laryngological Society that you mentioned, to what people is that society limited, if there is any limitation?
- A. It is limited primarily to the men who do work in that field in that city or locality, but they also extend invitations to others to become members.
- Q. All right. Now, any other laryngological societies that you were a member of?
- A. Well, I was a member of the International Society, The American Laryngological Association, the American Triological Society, the American Academy--
- Q. Just a moment. American Triological, explain to the jury what that is.
- A. Laryngological, Rhinological and Otolarynological Society, so for sake of brevity we call it the Triological Society.
- Q. And what does that Larynological and Otolarynological and--what is the other kind of "logical"?
- A. Rhinological.
- Q. All right. Now, what do those indicate to the layman?
- A. It is an ear, nose and throat society, and it is made up

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of specialists who can conform with the requirements of that organization. It has a membership of 500.

Q. Only 500 throughout the country?

A. 500. The American Laryngological Association has a membership of only 100.

Q. That is a limitation on the membership?

A. Yes, sir.

Q. And is that limited to invitation, American Laryngological?

A. Yes, sir.

Q. And how long have you been a member of that group of 100?

A. I became a member in 1926, I believe.

Q. Now, would you go ahead? What other associations?

A. The American Academy of Ophthalmology and Otolaryngology. Then I am a Fellow of the American College of Surgeons, a Fellow of the American College of Physicians, Fellow of the American College of Chest Physicians. I was a member of the Collegium Otolarynological, which is an international group.

Q. Explain what that is.

A. That is a society made up of members who are selected from the various nations of the world, men who are interested in otolaryngology and the limitation is ten members from any one country.

Q. And what did you say the name of that one is?

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-11w

- A. It is a Latin name, Collegium Otolaryngologium Cum Amicitiae. That is the formal name for it.
- Q. And you are one of the ten members from the United States?
- A. Yes.
- Q. And does that deal with your specialty of otolarynology?
- A. Ear, nose and throat.
- Q. All right. Go ahead. What other societies are you a member of?
- A. The American Association for Chest Surgeons, Military Surgeons. I think that covers all of the national societies. I was an honorary member of two foreign groups, the Scottish Ear, Nose and Throat group, and a French-speaking bronchoscopic society.
- Q. And are you a member of the American Bronchoesophagological Society?
- A. Yes, I am a member of the American Bronchoesophagological Association, yes, sir.
- Q. All right, sir. Now, would you tell the jury, please, have you held any offices in the Philadelphia County Medical Society?
- A. I was a president of the Philadelphia County Medical Society.
- Q. Have you held any offices in the Philadelphia Laryngological Society?
- A. Yes, I was secretary and president.

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T3-12w

- Q. At different times?
- A. Yes, sir.
- Q. And have you held any membership in the College of Physicians Section on Otolaryngology?
- A. I was chairman of that, also clerk.
- Q. And was that at different times?
- A. At different times.
- Q. Have you had any membership on boards of the American Board of Otolaryngology?
- A. I have been a member of the Board of Examiners of the American Board of Otolaryngology. Still am a participant in their activities, meetings and conferences.
- Q. Now, you told us that you were president of the Philadelphia Laryngological Society. Have you at any time held an office in the New York Laryngological Society?
- A. I was president of that organization, too.
- Q. Now, have you had any position as to the section of Otolaryngology and rhinology of the American Medical Association?
- A. Yes. I was secretary and then later chairman.
- Q. Have you held any position with regard to the American Bronchoesophagological Association?
- A. I think I held all the offices there--not at one time. But I was president, secretary, editor, and treasurer.

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- Q. And have you held any office in the American Laryngological, Rhinological and Otolaryngological Society you told us about?
- A. I was secretary and later editor and president.
- Q. How about the American Laryngological Association?
- A. That is the same one.
- Q. The same one. Have you held any office in the Pennsylvania State Medical Society?
- A. No, sir, except that I was a delegate a number of times.
- Q. Did you hold any office in the section of the Pennsylvania Medical Society dealing with ear, nose and throat?
- A. I was chairman of that section.
- Q. Now, have you received any awards from the American Laryngological Association at or since your retirement from teaching?
- A. I received the De Roaldes Award.
- Q. When was that and what is that?
- A. I received that--I think it was about 1950, or I may be in error about that. It is awarded by the association to the one who was reputed to be the outstanding otolaryngologist in the Americas.
- Q. In the Americas?
- A. In the Americas.
- Q. Have you received any award since your retirement from the Philadelphia County Medical Society?

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- A. I received an award for 50 years of medical service.
- Q. About when was that?
- A. That was this year.
- Q. Did you ever receive a Strittmatter Award?
- A. The Strittmatter Award was given to me in the early 40's, I believe.
- Q. And what is the Strittmatter Award?
- A. The Strittmatter Award is an award given by the Philadelphia County Medical Society for the member whom they believe has done outstanding work for that year.
- Q. Now, have you ever had anything to do with the International Congress of Otolaryngology?
- A. Yes, sir.
- Q. Is that an international organization?
- A. Yes, sir.
- Q. Embodying roughly how many countries?
- A. Well, it takes in all the countries of the world.
- Q. How many delegates did the American Laryngological Association, the Triological Association send to the meetings of the International Congress of Otolaryngologists?
- A. The otolaryngological groups as a whole commonly send two delegates.
- Q. Tell the jury of those two delegates if there has been any time when you were one of them?
- A. I was one of the delegates to the 1949--

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53-75w

- Q. Is that the fourth meeting in '49?
- A. It may well be, it was 1949, held in London, and then I was a delegate to the one that was held in Amsterdam, Holland, five years later--four years later--no, I think it was five years later, '54.
- Q. Now, Doctor, I would like for you to describe or state to the jury what is the pyriform sinus or pyriform fossa and where is it located, and in so describing, Doctor, as much as you are able to do, put it in laymen's language so that we can all understand it.
- A. The pyriform fossa or sinus is a recess or space, one on each side, which is a part of the hypopharynx and the outer wall is formed by the thyroid cartilage, which is the cartilage one can feel in one's neck, that is the Adam's apple. Also thyrohyoid membrane which is below that. The inner wall is formed by a fold running from the epiglottis to the arytenoid, the aryepiglottic fold.
- Q. Now let's go back and tell the jury in laymen's language, is the outer wall of the pyriform fossa the outer wall toward the outside of the throat?
- A. Yes, sir.
- Q. And you doctors call that lateral wall?
- A. Lateral wall.

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T4-sl

Q And the inner wall that you doctors call medial wall, is that -- that is, while it is in the throat -- is that the outer wall of the larynx?

A Yes, sir.

Q So that the inner wall of the pyriform fossa is against the outer wall of the larynx, is that a correct statement?

A It is formed by the outer wall of the larynx.

Q All right. Now, where is the pyriform fossa with respect to the opening of the laryngeal airway?

A The pyriform sinus is lateral or to the outer side.

Q All right, sir. And that is on both sides, is it?

A On both sides, yes, sir.

Q You have a right pyriform sinus and a left pyriform sinus?

A Yes, sir.

Q Now, at the top of the larynx, would you tell the jury what is there? You mentioned aryepiglottic folds and arytenoids and epiglottis, all terms that I am afraid we are not too familiar with. Tell us what they are and where they are located.

A Oh, I see. Well, I was going to say the top of the larynx really communicates with the food passageway. It is an air space above the larynx.

Q I am starting at the top of the larynx —

A Yes. Oh, I see. On each side is a fold which goes from the epiglottis. Now, the epiglottis is in front of the airway,

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projects some distance above. And the aryepiglottic fold is a fold that runs from the lateral aspect or lateral margin out --

Q You mean the outside margin?

A Yes, sir, the outer margin of the epiglottis backward, describes a more or less curved appearance, and terminates in the arytenoid. That is why we call it the aryepiglottic fold, because it goes from the arytenoid to the epiglottis.

Q What is the arytenoid?

A The arytenoid is a cartilage, more or less triangular in shape, that is set upon the cricoid cartilage, that is the cartilage below it, and its function is to move towards the midline, inward, or move laterally, outward, and in so doing it moves the vocal cords below and the aryepiglottic folds above.

Q All right, sir. Now, when a person is swallowing food or drink, swallowing anything, what is the pathway of that food after it gets to the place where the top of the larynx normally is?

A It goes lateral to the epiglottis.

Q To the sides?

A Yes, to the side of the epiglottis, into the pyriform sinus or sinuses, depending on whether it goes into both or into one only, continues down into the esophagus and

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into the stomach.

Q All right, sir. Now tell the jury, when you are swallowing, what happens to the larynx to keep food and drink from getting down your windpipe?

A In order to prevent food or fluid getting into the airway, the larynx during the act of swallowing is elevated. Anybody who will put his finger in the little notch on the Adam's apple and then swallows will find that the larynx moves up. The larynx is elevated and, at the same time, the arytenoids coming into the midline or towards the mid-line --

Q Does that mean toward the center?

A Towards the center -- Will bring the vocal cords towards the center, they will bring the aryepiglottic folds towards the center, and then the epiglottis, in addition to being elevated, since it moves up with the larynx, it also tilts somewhat backward and then food goes on both sides of the epiglottis, enters the pyriform sinuses and is on its way down through the esophagus into the stomach.

Q Now, during swallowing is the larynx -- while you are swallowing, the process you have just described, after the larynx is elevated and the epiglottis is tilted, does that leave the larynx open or closed? 2018027956

A It is closed.

Q And is that the reason that food and drink doesn't get in

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the larynx?

A Yes, sir.

Q During this act of swallowing, is the pyriform sinus or pyriform fossa open or closed?

A It is open.

Q And is there any place that food or drink can go except over the pyriform fossa on its way to the esophagus?

A In a normal larynx that is the only place where it can go.

Q I am talking now about the pyriform fossa.

A Yes. Yes.

Q Insofar as the pyriform --

A Oh, yes, yes.

Q Of course, if you had an abnormal larynx, it would go into the larynx?

A It would go into the airway.

Q Yes. I am talking about -- if it goes in the airway you know it, don't you?

A Should.

Q All right. What happens when food or drink gets into the airway of the larynx, in the cavity of the larynx?

A Well, if it gets into the cavity of the larynx, an individual commonly has a strangling attack and becomes purplish because they can't breathe, have a spasm, and unless it can be evacuated and the airway re-established,

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T4sl3

such an individual can asphyxiate.

Q All right. Now, let's move over to respiration. In this area that we are talking about, you have described how the larynx moves up and out of the way for swallowing. What does the larynx do and what happens to the pyriform fossa when you are inhaling air or smoke or anything you might inhale?

A During inspiration the vocal cords separate, and when they separate the aryepiglottic fold and the arytenoid obviously separate, because that is the only way the vocal cords can separate, and that leaves a triangular airway corresponding to the vocal cords. That is the normal airway. And during that the pyriform sinus is completely obliterated by the lateral movement of the aryepiglottic folds and arytenoids. It is an accepted physiological mechanism that nature has provided us that the airway either is open or closed and the food passageway either is open or closed, but they can't both be open at the same time. They can't both be open at the same time.

Q All right, sir. Now, when you say that during inhalation or respiration the pyriform fossa is obliterated, what do you mean "obliterated"?

A Well, the aryepiglottic folds and arytenoid move laterally and rest against the lateral wall

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T4s14

of the hypopharynx.

Q All right. Now, you say the lateral wall, is this again the outside wall?

A The outer wall, yes.

Q And when you say hypopharynx, what is that?

A Well, that is the pharynx in toto represents a funnel arrangement, as it were, which terminates below in the opening of the esophagus, and the larynx is placed in the anterior part of this funnel, and that leaves this space to each side of the larynx and behind the larynx which is more or less horseshoe-shaped. That is the hypopharynx.

Q And is this where the pyriform fossa is located?

A The pyriform fossa is, as it were, the leg of the horse-shoe on each side. That is the space on each side, the recess on each side.

Q When you inhale and the arytenoids and the aryepiglottic folds of the larynx go against this lateral or outside wall --

A Outside wall --

Q -- of the throat in that area --

A Yes --

Q -- does that have the effect of leaving the pyriform fossa open or closed when you are inhaling air?

A Closed.

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T4s15

Q And if the pyriform fossa -- strike that. If you get -- If you inhaled air down into your food tract, what effect would that have on you? You described the other system.

A Well, we would feel a bit uncomfortable by reason of distension.

Q What is distension?

A Ballooning up. So we would prefer not to have that, as it necessitates belching, and the food passageway was not designed for the swallowing of air.

Q Now, Doctor, let me ask you whether or not it is possible for an individual to intentionally inhale air and swallow at the same time?

A It would be difficult to do. You would have to break up a very intense reflex mechanism, and I don't believe one could do it short of a lot of practice, and probably not be able to do it then.

Q Have you ever known anyone who could do it?

A No, sir.

Q All right. Now, Doctor, when you are chewing food and somebody slaps you on the back and you get food down in your windpipe, or when you hiccough and get food down your windpipe, what happens then?

A You have a strangling attack, choking, and it may be very serious in that instead of merely coughing and clearing your throat you may have, as I indicated a little while

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ago, a spasm of the larynx, and at times those individuals become unconscious.

Q All right. Are the functions of swallowing and breathing antagonistic functions that cannot normally occur at the same time?

A They cannot.

Q All right. Is the larynx located in the respiratory tract, the larynx?

A It is a part of the respiratory tract.

Q And what are the other parts of the respiratory tract after you enter the laryngeal cavity?

A Immediately below the larynx is the trachea, then the main bronchi and the lobar bronchi, that is the bronchi going to the various lobes of the lung.

Q Is it correct that the food tract and the respiratory tract, while common in your mouth, divide at the upper margin of the larynx?

A They are two separate passageways.

Q And what is the food tract from there on?

A The pyriform fossa, esophagus, and the stomach.

Q And when you swallow something, is that the pathway that it must take?

A It must take that in order to get to the stomach.

Q Does the pyriform fossa have any function at all in respiration?

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T4sl7

- A None to my knowledge.
- Q And does it do anything, to your knowledge, other than become closed up? During respiration, I mean.
- A Yes.
- Q Yes.
- A No, it does nothing to my knowledge.
- Q All right. Now, is it possible that a person inhaling smoke could have smoke eddying and whirling while inhaling smoke and depositing matter from the smoke down in the pyriform fossa?
- A I don't think so.
- Q And why is that?
- A Because the pyriform fossa is not an air-containing space during respiration. It is closed, and since it is closed, no air can enter it.
- Q And the flow of air that goes through the larynx and down into the lung, would you tell the jury how the flow of that air is governed in addition to what you have just stated.
- A Well, air entering the lungs during inspiration enters because we are expanding our bellows, our lungs, so it is drawn in by negative pressure, it is drawn in by negative pressure, and the air propels itself with adequate rapidity to take care of this negative pressure. It goes over the epiglottis, in between the vocal cords into the trachea and into the main bronchi and is distributed to the lungs.

T4-s18

Q And is there any eddying and whirling before it passes the point of stricture of the larynx?

A I don't believe so.

Q So not only is the pyriform fossa closed, but the method of drawing the air in is not such as to cause eddying and whirling, do I understand that correctly?

A Yes, sir.

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P5-mfl

Q Now, Doctor, let's talk about the cells, the epithelial cells -- they are called lining cells, are they not?

A Yes, sir.

Q What type of epithelial cells do you have in the respiratory tract?

A Throughout a great part of it, it is called -- so-called respiratory epithelium.

Q How is that described?

A Well, it is a columnar ciliated epithelium.

Q When you say columnar ciliated, is that sort of oblong or long type cells --

A With hairline prolongations.

Q Incidentally, just on the true vocal cords, themselves?

A I said in great part. Now, the vocal cords are covered by a pavement type stratified squamous epithelia.

Q - Throughout your entire respiratory system, is that the only place you have squamous cells?

A That and a part of the epiglottis also has.

Q I mean after you enter the larynx.

A Oh, yes, sir, that is the only place.

Q As I understood you, the epiglottis functions also in dividing the food --

A Yes.

Q -- sending it down in swallowing?

A Yes.

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T5-MF2

Q So from the laryngeal cavity, from there on, is there any place other than the true vocal cords, is there any place where you have any columnar ciliated epithelium? And when I talk about epithelium, I am talking about lining, and we are talking about lining cells?

A Yes, either lining or covering.

Q Now, is there any difference in the cellular structure of the lining or epithelium in the pyriform fossa and on down the food tract from the respiratory tract?

A The pyriform fossa and the remainder of the food passageway down to the stomach is lined or covered by a stratified squamous epithelium.

Q Is that a round and flat type --

A Flat, much like the skin.

Q Much like the skin, and is that type of epithelium tougher than the columnar ciliated type?

A Yes, sir.

Q And is that type of epithelium to handle and resist the rough foods and things that you drink and that go down to your stomach?

A I believe that is the intent of having it specialized in that manner.

Q Now, in the area of the pyriform fossa, in addition to this squamous epithelium, are there muscles and other tissues?

A Pardon me, I am sorry, I didn't get that.

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T5-MF3

Q I say, in the pyriform fossa are there muscles and other tissues in addition to just the squamous epithelium?

A Yes, sir; yes, sir.

Q And would you describe for the jury -- you said that the inside wall of the pyriform fossa was against the outside wall of the larynx; now, I would like for you to start with the outside, that is, the outside which is facing the pyriform fossa, and what is the first thing that you have there? Describe the wall, in other words.

A The wall is covered by squamous epithelium, and beneath that is a loose areolar structure.

Q A what?

A A loose areolar structure, which we have under all epithelium surfaces. That is why you can lift your skin from the tissues beneath. You have that tissue, and beneath that you have in certain areas muscle, in certain areas, cartilage, and that is about, one might say, the mid-way across the wall towards the larynx.

Q Then go on through.

A Then on the other side we again have muscle, and if you happen to be at the level of the vocal cords, then you would have considerable fibrous tissue, and then inside we have in certain areas glandular structure and again the lining membrane.

Q Now, Doctor, in this same food versus air passage system, as

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T5-mf4

we get on down into the esophagus and as far down as the second rib, tell the jury whether or not there is a common wall between the esophagus and the trachea.

A. Yes, sir, the esophagus lies immediately behind the trachea from its very beginning until one gets to where the trachea bifurcates.

Q. What do you mean, bifurcates?

A. Divide in a right bronchus going to the right lung and a left bronchus going to the left lung. It is like a tree, the trachea is the trunk. Now, the trunk of that tree and the esophagus have a common wall so that when you enter the esophagus you are immediately behind the trachea and we have there a party wall just as we have a party wall in the pyriform fossa and the larynx.

Q. Let me ask you whether or not the existence of the fact that in the esophageal area the esophagus and the trachea share a party wall and in the area of the pyriform fossa the pyriform fossa and the larynx share a party wall on one side, does that make a disease of the esophagus or a disease of the pyriform fossa the same as a disease of the respiratory tract?

A. No, sir.

Q. Do you consider that cancer of the pyriform fossa and cancer of the larynx are the same or separate disease entities?

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T5-MF5

- A Separate disease entities.
- Q Give the jury, Doctor, some of your experience in the field of cancer in your area, what the extent of your experience has been, how long you have been studying it, and what you have done in that regard.
- A I began with Dr. Jackson in the diagnosis and treatment of cancer, and then continued on in 1930 when I took over the department, and I saw quite a large number of patients with cancer at the Jefferson Hospital. I was also on the staff of the Philadelphia General Hospital, which is a county-city institution, has a patient population of around 2,000, and we saw many, many cases of cancer there, and as I indicated, I have operated on about 1200 patients with cancer of the larynx, doing either modified or radical procedures, depending upon the extent of the lesion.
- Q All right, now, Doctor, I want to depart for a moment from that particular subject and ask you --  
**(DEFENDANT'S EXHIBITS "R" AND "S" WERE MARKED FOR IDENTIFICATION.)**
- Q Doctor, I neglected to ask you and will now ask you in connection with your last statement if you have given talks, delivered papers, addresses, written for magazines, medical journals in your profession, so-called scientific and learned articles in the area of the specialty and on

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P5-mf6

the general subjects that we have been describing?

A Yes, sir.

Q Would you tell the jury approximately how many different articles or papers or publications you have had on the subject of your specialty?

A Covering the entire field, I have written between — around 160, 170 papers.

Q I will hand you Defendant's Exhibit "S" and ask you if this is a list of scientific contributions which you prepared at my request?

A Yes, sir, this is.

Q I call your attention to the fact that, not counting the subheads, that you have listed 188, with some of them having subheads.

A Yes.

Q Would you tell the jury about when you started publication, publishing anything in your field?

A I believe my first -- well, I wrote a paper while I was in the Navy, that was before 1922, and after that I believe I started about 1924.

Q And did you continue then writing publications or articles for publication down to about 1959?

A Yes, sir.

MR. HARDY: I offer in evidence Defendant's Exhibit "S".

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P5-mf7

MR. FIELD: I object to that as improper, Your Honor. It would be hearsay and it is not -- I have no objection to his saying he has written a lot of papers, but to offer this --

MR. HARDY: I don't intend to read the list to the jury. It is on qualifications.

MR. FIELD: No, it is not. On a point where there is and can be no cross examination, it is hearsay and highly improper.

THE COURT: I think the objection will be sustained.

MR. HARDY: Give it to me.

MR. FIELD: I would like to look at it.

MR. HARDY: The objection was sustained.

MR. FIELD: Well, you have had it marked, haven't you?

MR. HARDY: That is correct. I may have to, at some point in my examination, go down through these articles asking him if he has written them.

Q Now, Doctor, based upon all the experience that you have told us about, do you know the cause of cancer or the causes of cancer?

A No, sir.

Q Do you know anybody that does?

MR. FIELD: I object to that as improper, Your

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P5-mf8

Honor, whether he knows anybody that does. It would be absolutely immaterial, whether he knows anybody that does.

THE COURT: I think he can give his opinion on it.

Q Do you know anybody that does?

A No, sir.

Q All right, do you know, with the years of your experience the cause or any contributing causes that you as a doctor would state apply to cancer of the pyriform fossa?

A No, sir.

Q Has there through the years been research and work done with regard to various suspects in this field?

A Yes, sir.

Q Now, would you tell the jury, based upon your knowledge, what some of the suspects are that you know have been investigated in connection with cancer of the pyriform fossa or hypopharynx where it is located?

MR. FIELD: I object to what -- he asked the witness what are the suspects that have been investigated. Unless this is also his opinion and is a result of his work and investigation, what some person at some date may have investigated as a suspect, would be hearsay and would be improper and I object to it for that reason.

MR. HARDY: I am asking, Your Honor, the

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T5-mf9

suspects about which Dr. Clerf knows.

MR. FIELD: I object again to any of the suspects about which he knows. I know that in the paper it says that somebody murdered a man in New York. I object to it as calling for improper hearsay, and I will continue to object to it unless he confines it to suspects within his experience and based on his opinion and based on his knowledge of suspects, not what somebody else knows.

THE COURT: I believe from the tenor of the question, it is based on his own knowledge.

MR. FIELD: And I object to it not only what somebody else says a suspect is, but what he knows and suspects.

THE COURT: He is testifying as an expert. He can testify as to the basis of his opinion. Of course, you may cross examine him on the basis of his opinion.

MR. FIELD: Yes, sir, and I have no objection to his giving opinion as to what he says a suspect is or he ever believed a suspect is, but to quote somebody else as Mr. Hardy first asked him and implied in the second question, what are some of the suspects that people have believed, that is hearsay and improper.

MR. HARDY: I didn't ask him to quote anybody, Your Honor.

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MR. FIELD: I am not talking about quoting. I said when he asked him to say what somebody else believes.

MR. HARDY: When he says quote, I take it that is what he is talking about. I am not talking about quoting. The doctor has testified he didn't know what caused it. I am asking now back through the years of his experience, the things that he knows that have been suspects.

MR. FIELD: By him. I object to it unless the question is confined to the doctor and on his opinion and not merely --

THE COURT: The objection will be overruled.

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- Q. Now, Doctor, will you proceed.
- A. Suspects, in the very beginning we believe that probable infection of the mouth, dental infection, gum infection, might be a cause, but we were never able to support that thesis. We have always suspected hot, highly spiced, irritating foods. We have suspected--
- Q. Excuse me. On those two items, what was the basis for that? Because of contact or otherwise?
- A. Because of contact.
- Q. Because of contact. Infection in the mouth when you swallow, would that go over the pyriform fossa?
- A. That would go into the pyriform fossa.
- Q. And hot, superheated, irritating foods, does that go over the pyriform fossa?
- A. Yes, sir.
- Q. All right, go ahead.
- A. Then injury, notably chemical burns. We had a number of patients who had swallowed lye earlier in life and had burns in the pyriform fossa, and that has been suspected as a possible--not necessarily cause, but a site where cancer might more readily develop. Then injury. Then alcohol.
- Q. Now, what is the basis for suspecting alcohol?
- A. Well, that too can be irritating. Then there are certain systemic conditions, notably nutritional

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disturbances, vitamin deficiencies and iron deficiencies exhibited in this Plummer-Vinson syndrome, syphilis.

- Q. Incidentally, let me stop you at that point, Doctor. What is a Kline test?
- A. It is one of the tests that is employed in the condition of syphilis.
- Q. And what does a positive Kline test indicate?
- A. Well, I would suspect that such an individual might have had syphilis that was incompletely treated, and I would of course want that investigated further.
- Q. All right. Go ahead now. What other suspects do you think of?
- A. Then there is the question of race. It has been shown that cancer of the pyriform sinus is more common in Nordic and Anglo-Saxon people than among Latins, and this matter of heredity, and under that would come constitutional factors, is, I think, a very important item among the suspects.
- Q. Now, incidentally, in connection with heredity, is heredity limited to just whether your mother and father had cancer, or does it go back further than that?
- A. Oh, yes, it goes back much further than that.
- Q. All right, go ahead, if you have any others.
- A. I don't believe I have any more that I can think of at the moment.

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- Q. All right, sir. In this particular area of the pyriform fossa, is there any sex ratio or sex difference?
- A. Cancer of the pyriform fossa is more common among men.
- Q. And what about in the area of the postcricoid approximately a half an inch away?
- A. Well, that is an interesting one might say phenomenon, because only a very short distance posterior or behind, cancer among women is far more common, although they are beginning to believe now that it is becoming more common among men.
- Q. And this region you are talking about there, how far from the pyriform fossa is that?
- A. Oh, it is about two centimeters at the most.
- Q. How much is two centimeters?
- A. Well, two and a half centimeters equal an inch.
- Q. And is that still in the area of the pyriform fossa but behind the cricoid in the same space?
- A. It is at the same level, but just a little farther back.
- Q. The same level but farther back. It is not in the respiratory system, is it?
- A. No.
- Q. It is there in the food tract?
- A. In the food tract, yes, sir.
- Q. Now, is there any connection between susceptibility-- does individual susceptibility play any part in the

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picture?

- A. That is a situation or a problem that has been thought of much, but there hasn't been any direct evidence brought to bear to support it.
- Q. Do you consider virus as a possible suspect?
- A. Virus now seems to be commanding the attention of a larger number of investigators than formerly, and it hasn't been proven nor has it been ruled out.
- Q. Now, with regard to all of these suspects that you have mentioned, are you telling the jury that any one of them causes or contributes to cause any pyriform fossa cancer, or are you just stating that they are suspects?
- A. So far as I am concerned they are suspects and when we are trying to find the cause of any disease, be it cancer or anything else, one has to round up all the suspicious characters and then decide which one is guilty, if any of them are, and that is why I say they are suspects, nothing more than that.
- Q. Do you consider, in light of your testimony, that the cigarette smoke does not come in contact with the pyriform fossa, do you consider that the inhalation of cigarette smoke is a suspect for pyriform fossa cancer?
- A. I wouldn't consider it such.
- Q. Why?

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- A. Contact is not made between the smoke-bearing air and the pyriform fossa.
- Q. Do you consider that other factors, other things that you might breathe in, such as air pollution, things of that kind, are suspect insofar as the pyriform fossa is concerned?
- A. No, sir.
- Q. Now, Doctor, with regard to Mr. John Ross's cancer, you have, I believe, at my request previously studied his Mayo Clinic hospital records, which are Plaintiff's Exhibit 48. Have you studied those records?
- A. Yes, sir, I have.

(DEFENDANT'S EXHIBIT T WAS MARKED FOR IDENTIFICATION.)

- Q. Now, I will hand you Defendant's Exhibit T, being the pathology report of Dr. Ferdinand Helwig and I will ask you if you haven't also studied that at my request?
- A. I have, sir.

MR. HARDY: And this apparently hasn't been offered in evidence.

I offer in evidence Defendant's Exhibit T, Dr. Helwig's report that was referred to in the other depositions and identified.

THE COURT: Very well.

(DEFENDANT'S EXHIBIT T WAS RECEIVED IN EVIDENCE.)

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Q. (By Mr. Hardy) Now, I hand you a St. Luke's Hospital diagnosis chart signed by Dr. John Knight, and I ask you if you have seen that?

A. No, sir, I have not.

Q. That is Plaintiff's Exhibit 47. I will ask you whether or not you have studied the surgical specimen, the pictures of the surgical specimen taken from John Ross's throat?

A. I have.

Q. All right. Now I will ask you if you agree with the diagnosis shown on Plaintiff's Exhibit 47 of carcinoma of the left pyriform sinus, upper esophagus?

A. On the basis of the histologic report, I certainly would agree, yes, sir.

Q. And is that the same, in substance, diagnosis of Dr. Helwig of undifferentiated squamous cell carcinoma of the pyriform sinus?

A. It is.

Q. And was that the same diagnosis that was at the Mayo Clinic?

A. Yes, sir.

Q. Now I would like to ask you, Doctor, to tell the jury whether or not this cancer of the left pyriform fossa ever got out of the left pyriform fossa and into the larynx?

A. No, sir.

Q. From your observation and study of the records and from

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your observation of the pictures of the specimen,  
can you tell the jury whether or not the internal  
cavity of the larynx appears to be normal or abnormal?

- A. It looked normal to me.

THE COURT: We will have our usual mid-morning recess at this time.

We will be in recess for ten minutes.

The Court cautions the jury again not to discuss the case, in line with the prior instructions.

(Recess)

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MR. HARDY: Proceed, Your Honor?

THE COURT: Mr. Hardy.

Q (By Mr. Hardy) Doctor, is cancer of the pyriform fossa a common disease?

A No, sir.

Q Speak up loud, now.

A It is not.

Q You stated before the recess that you had operated, I believe you said, some 1200 cancers of the larynx. I didn't ask you how many cancers of the larynx as distinguished from other sites. How many cancers of the larynx itself have you seen in your clinical practice back through the years, approximately?

A About, possibly, 3,000, 3500, possibly more.

Q Now, with regard to cancers of the pyriform fossa, about how many of those have you seen in your clinical practice?

A I haven't seen more than 200.

Q How about cancers of the esophagus, the food pipe below the pyriform fossa?

A I have seen several thousand, I am sure.

Q All right. Now, Doctor, I was just starting to refer to John Ross's cancer, and I want to show you an exhibit that has been marked Defendant's Exhibit R and ask you if that is an enlarged photograph of the specimen that was removed from John Ross's throat, according to your

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understanding.

A It resembles the photograph, the small photograph, that I have seen.

Q Does it appear to be the same as the small photograph?

A I think it is.

MR. HARDY: I offer in evidence Defendant's Exhibit R.

THE COURT: It will be admitted.

(DEFENDANT'S EXHIBIT R WAS RECEIVED IN EVIDENCE.)

Q (By Mr. Hardy) Now, Doctor, could you step down here and with this pointer point out -- Well, first, tell me what does that photograph show?

A It shows the larynx and --

Q Where is the entrance to the larynx?

A The entrance to the larynx would be behind the epiglottis -going in this direction (indicating).

Q You are indicating down in the dark area in the center of the photograph?

A Yes, sir.

Q Where is the epiglottis?

A This is the epiglottis here (indicating).

Q Is that the organ that you stated plays a part in closing up the larynx during swallowing?

A Yes, sir, that has to do with tilting back (indicating), and in that way affording protection to the orifice, the

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upper orifice, of the larynx.

Q Now, when you say the upper orifice of the larynx, are you talking about the upper opening?

A The upper opening in contradiction to the lower opening, which is below this.

Q Below the photograph?

A Yes.

Q All right. Now, point out for the jury the location of the aryepiglottic folds at the top of the larynx or at the top of the laryngeal inlet.

A I indicated earlier that the aryepiglottic fold means a fold that runs from the arytenoid to the epiglottis and this is the fold (indicating). That is the aryepiglottic fold on this side, the right side.

Q Show it on the left side.

A Now, on the left side it is here (indicating), and then we observe this swelling (indicating), which is in part aryepiglottic fold and part arytenoid. That is the one on the left side.

Q All right, now, Doctor, you mentioned the pyriform fossa. Is the pyriform fossa shown in that photograph?

A It is not --

Q I mean the tissues that form the pyriform fossa.

A Unfortunately it has been removed. The lining membrane has been removed here (indicating). One can see part of it

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on this side (indicating), in the depths of which one sees the growth.

Q Now, I would like for you -- you mentioned the outside wall of the pyriform fossa, which is the outside wall of the throat --

A Yes, sir --

Q -- in the hypopharynx area. I would like for you to point out to the jury the tissue in that photograph that forms the outside or lateral wall of the pyriform fossa on the left.

A It begins here (indicating), which is the front part of the pyriform fossa, and it continues in this direction (indicating). As I say, it is occupied in great part in its lower portion by the growth, so one cannot demonstrate it too well here.

Q Is the portion of the photograph to the left of where you have been pointing that outside wall of the pyriform fossa or throat as shown in the specimen?

A This is the outer wall, yes, sir.

Q All right. Now, if you would, show the jury the approximate outline, with your pointer, of the cancer as it appears -- well, strike that. First I should ask you, does the cancer involve the outside wall of the throat as well --

A Yes, sir.

Q You say it does?

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- A It does, yes, sir.
- Q All right. Does it also involve the inside wall?
- A It does, sir.
- Q And which is involved to the greater extent as you can observe from the specimen?
- A It is rather difficult to be absolutely certain as to whether there is more of the outer than the inner wall involved here. It does extend, well, posteriorly and well down, so that it really is in close relationship to, if not involving, the orifice of the esophagus.
- Q Now, by "orifice of the esophagus", you are talking about the opening of the esophagus?
- A The upper opening of the esophagus.
- Q All right. So is it fair to state, then, do I understand you correctly, that this cancer involved the outside wall of the throat, or pyriform fossa, and the inside wall of the pyriform fossa, and appears to extend down as far as the opening of the esophagus?
- A It appears to be that far down, yes, sir.
- Q All right, sir. Now, if you would, you have told the jury in your earlier testimony about how, when a person inhales, the pyriform fossa are closed. Now, would you point out the particular pieces of tissue and the organs that do this expanding you described in order to close the pyriform fossa.

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A During inspiration the larynx opens. That is, the space between the vocal cords becomes triangular in shape by reason of the vocal cords separating, and they are separated because the arytenoids, one here (indicating), and one there (indicating), are pulled apart by the muscles that pull the arytenoids apart. And when they do that, they bring this fold (indicating) outward to the lateral wall, and this --

Q Wait a minute. To --

A To the outer wall.

Q Outer wall of what?

A Of the throat. To the outer wall of the throat.

Q What does that do, then, on that side with regard to the pyriform fossa?

A It obliterates the pyriform fossa.

Q Can any smoke eddy or whirl down there?

A No, sir.

Q All right. Now, on the other side show them what happens.

A Well, it is more difficult to show here because we have the growth filling a part of this space and crowding things towards the midline. But nonetheless, if this growth were not present, on inspiration this fold (indicating), and this arytenoid would not be so swollen, moves laterally, moves outward, and makes contact with this mucous membrane, which, incidentally, has been

T7s25

placed outward, crowded outward, in this specimen. Its normal position is inside this area here (indicating) instead of being crowded way out as it has been moved out.

Q This closing operation, Doctor, is it or is it not when the aryepiglottic folds, by the expansion and movement of the arytenoids, go out to the outer wall of the throat, do tissues come in contact with one another there to close the pyriform fossa?

A Yes, as much as those you would put -- if this (indicating) were the lateral wall of the throat and we might consider this (indicating) as the aryepiglottic fold and arytenoid, it moves outward against the outer wall (indicating).

Q All right, sir.

A Moves outward against the outer wall.

Q Now, if you will just stay there, Doctor, until I get this photograph marked.

(DEFENDANT'S EXHIBIT U WAS MARKED FOR IDENTIFICATION.)

Q (By Mr. Hardy) Now, Doctor, I show you a photograph which has been marked as Defendant's Exhibit U, and ask you if that is a photograph of John Ross's larynx that you previously examined in smaller form with the cartilage cut and the larynx open?

A Yes, sir, I think it is.

MR. HARDY: Offer in evidence Defendant's Exhibit U.

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THE COURT: It will be admitted.

(DEFENDANT'S EXHIBIT U WAS RECEIVED IN EVIDENCE.)

Q (By Mr. Hardy) Now I will ask you, Doctor, if this photograph shows the inside of the larynx cavity of John Ross.

A Yes, sir.

Q Would you point out for the jury the location of the true cords.

A This (indicating) is the left cord and this (indicating) is the right cord. This (indicating) is the front part of the larynx where the two cords come together in front.

Q Now, for clarity, Doctor, referring again to Exhibit R, is the thing that is shown in the center of Exhibit U what is down inside the laryngeal opening that you have described in Exhibit R, although it is closed there?

A It is.

Q Now, what is this cartilage that has been cut?

A That is the signet of the cricoid cartilage.

Q All right. And where on that photograph is the location of the cancer?

A It is off in the right -- in the left pyriform fossa here (indicating).

Q And, Doctor, could you show on that photograph the location within the laryngeal cavity of what you doctors call the false cords?

A The false cords are immediately above the true cords.

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This (indicating) is the one on the right side, this (indicating) being a true cord. This (indicating) is the one on the left side, this (indicating) being the true cord.

Q Now, this interior of the larynx, was that -- is that, from your examination and your study of the hospital records, normal or does it contain any cancer?

A All the records indicate that it is normal.

Q All right. Does it appear that way to you?

A It appears that way to me, yes, sir.

Q All right, sir. I believe you may take the stand again.

Now, Doctor, in your opinion, are cancer of the pyriform fossa, such as John Ross's cancer, the same disease or different than cancer of the airway inside the larynx?

A Well, histologically it might be the same, but anatomically it is quite different.

Q What do you mean "histologically"?

A Well, the microscopic appearances under the microscope might resemble one another, but -- they might resemble one another, yes.

Q Well, isn't that also true of cancer of the colon?

MR. FIELD: I object to that as leading and suggestive, Your Honor.

MR. HARDY: Excuse me. I will withdraw the

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question.

Q (By Mr. Hardy) State whether or not that is also true of cancer at far removed sites, such as colon, stomach, if many cancers don't histologically appear the same?

A Yes, sir. I may say that cancer of the skin surface and cancer of the pyriform fossa and cancer of a vocal cord are very difficult to distinguish if one looks only at the cancer cells and not at the tissue beneath the cancer.

Q All right.

A It is a squamous cell cancer.

Q All right, sir. And if you look at cancers in the stomach or in the colon or in the cervix or some place else, isn't it true that -- or is it true that, under the microscope the cancer cells may look similar?

A They may look quite alike one another.

Q Does that indicate or not indicate, or does it indicate, anything with respect to the disease and its causation?

A No, sir.

Q It does not indicate anything?

A It does not indicate anything.

Q All right. Now, Doctor, there has been some testimony in this case to the effect that at least one doctor considers cancer of the pyriform fossa as being a part of the larger problem of cancer of the larynx. From the standpoint of causation, behavior and otherwise, do you

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agree or disagree with that statement?

A I certainly wouldn't agree with it unless he is speaking of cancer in a very broad, general way. It would have to be very broad.

End T7

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- Q. Are the suspects for cancer of the larynx and cancer of the pyriform fossa the same or different?
- A. Some of them differ. Others possibly could be the same.
- Q. Now, based upon your study of the medical records and your examination of the specimen, are you able to determine any cause or contributing cause of John Ross's cancer?
- A. I am not.
- Q. Would you be able to say that any one of the suspects would be applicable to any particular cancer?
- A. I could not, no, sir.
- Q. Now, Doctor, if we assume that for many years Mr. Ross, from 1933 to 1952, smoked excessively, varying estimates on that, but we can agree, I am sure, that he smoked excessively, more than two packs a day and sometimes as high as four packs a day, will you tell the jury whether or not, based upon your knowledge of the anatomy and its functioning in this area, that inhaled smoke would reach the location of his cancer?
- A. I would not consider it as reaching the area occupied by that cancer.
- Q. Well, can you state, anatomically and as you have described, that it does or does not?
- A. It does not.
- Q. All right. Now, Doctor, if you assume that amount of

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smoking, would you have an opinion to a reasonable medical probability that John Rose's cancer either was or was not caused by smoking?

- A. I do have an opinion, yes, sir.
- Q. All right, tell the jury what your opinion is.
- A. I do not believe that smoking can be considered even as a suspect, much less a cause.
- Q. Now, Doctor, there has been, as I told you, some testimony with regard to larynx cancer. Tell the jury what the location of a larynx cancer is.
- A. A larynx cancer is a cancer that develops within the cavity of the larynx, and the most common site is on the vocal cord.
- Q. And is that the pathway of everything you breathe?
- A. Yes. Yes, that is the airway.
- Q. Now, tell the jury whether or not cancer of the pyriform fossa and cancer of the larynx behave the same?
- A. Cancers generally conform to a certain behavior, yes.
- Q. Well, what about the malignancy of a larynx cancer as compared to a pyriform fossa cancer?
- A. Well, a pyriform fossa cancer is considered more malignant than a laryngeal cancer.
- Q. What about the cure rate between pyriform fossa cancers and larynx cancers?
- A. Well, the cure rate is very poor compared with cancer

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of the larynx. The cure rate of pyriform sinus cancer is very low compared with cancer of the larynx, and there is another difference, and that is that pyriform sinus cancer metastasizes earlier than does cancer of the larynx. That can be considered as one of the reasons possibly why the cure rate is not so good.

- Q. What do you mean by metastasize?
- A. Well, it spreads to the lymph nodes in its area very often before we even suspect that the patient has a cancer. That may be the first sign.
- Q. So of the type cancer that John Ross had here, in your experience what is the survival rate of those who have pyriform fossa cancer?
- A. The statistics vary a great deal. In my personal statistics, when I consider all the patients I have seen and not all of them were operated on, by any means, possibly my cure rate wouldn't be more than four or five percent, and I may say one of the reasons for that is that I saw many at the Philadelphia General Hospital, where the patients commonly came in with advanced cancer, they were not good physical risks, and we couldn't carry out the surgical treatment that one might have among private practice, where the patient's general condition is better.
- Q. So would you suspect the cure rate in a private hospital

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rather than a general hospital, such as you were in,  
to be higher or lower?

A. Oh, yes.

Q. Higher?

A. Yes. Decidedly so.

Q. Now, even allowing for that, is the cure rate of  
pyriform fossa cancer a high cure rate or a low cure  
rate?

A. A very low cure rate.

Q. Now, compare that, if you will, with cancer of the  
larynx. What is the cure rate of cancer of the larynx?

A. The cure rate of cancer of the larynx of course varies  
in different clinics but by and large it varies from  
fifty-five to even as high as sixty-five percent.

Q. And which cancer is usually discovered more rapidly,  
cancer of the pyriform fossa or cancer of the larynx?

A. Cancer of the larynx is discovered much earlier  
because the common symptom in cancer of the larynx is  
voice disturbance, hoarseness.

Q. Now, in cancer of the pyriform fossa do you have  
voice disturbance or hoarseness late in the cancer?

A. It is a late symptom.

Q. What about in larynx? Is it early or late?

A. Hoarseness is an early symptom, is often the first  
symptom.

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- Q. Now, with regard to cancer of the pyriform fossa, does that appear in people of any particular age group more often than in other age groups?
- A. Well, it is a disease that is seen in the adult male more often than in the female, and it is commonly after the age, we will say, of 50. There again it varies in various statistical studies.
- Q. During the period of your experience from 1922, your clinical experience, to 1954, did you observe any increase in the occurrence of cancer of the pyriform fossa?
- A. I don't think I did, no.
- Q. Now, Doctor, since there has been some reference in this case to larynx cancer and you were describing the difference, I would ask you if you have an opinion--I am leaving pyriform fossa, now, and talking about larynx--do you have an opinion to a reasonable medical probability, based upon your many years of experience, as to whether or not larynx cancer is or is not caused by smoking cigars or cigarettes as a contributing cause?
- A. I have an opinion.
- Q. All right. Tell the jury what your opinion is, based upon those years of experience.
- A. Well, at most, smoking could be considered as a suspect.

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Q. Do you have an opinion to a reasonable medical probability as to whether it does or does not cause or contribute to it, out of the suspect area, to a reasonable medical probability?

A. I do not believe that it does.

Q. All right. Now, you mentioned that at most it could be considered a suspect, as to larynx cancer?

A. Yes, sir.

Q. And we are talking about the inside cavity of the larynx, is that correct?

A. Yes, sir.

Q. Now, do you state that based upon the fact that inhaled smoke goes through the larynx or what is your basis for saying that at most it would be a suspect?

A. Well, obviously the smoke goes through the larynx and the vocal cords are a narrow point in the laryngeal airway, so that deposition of smoke particles, or whatever it is, should occur immediately beyond that. But yet there is--as far as I am concerned, there hasn't been any increase in cancer in that area.

Q. During the period of your clinical experience in 1922 to 1945 did you observe any appreciable increase at all in cancer of the inside of the larynx?

A. That I cannot answer by yes or no, but I will say this, that we are seeing and have in the last 25 years seen

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more cases of cancer of the larynx than we did formerly. I think that is in part better diagnosis and in part it is due to an increase in the number of male adults who are becoming old enough to develop cancer. There weren't too many 50-year-olders in 1922.

- Q. Has that been a large increase, in your experience?
- A. I would say a moderate increase.
- Q. Now, Doctor, on the question of knowledge, and the state of medical knowledge, I would like to ask you whether or not before the year 1952 any organization of which you are a member or with which you have been connected has taken any position that cigarette smoking causes or is a contributing cause of cancer of the pyriform fossa?
- A. They have taken none to my knowledge.
- Q. Secondly I would like to ask you if any of those organizations to the very day that you occupy this witness stand have ever taken any such position to your knowledge?
- A. They have not.
- Q. Next, at any time in all these organizations dealing in your specialty, including the American Medical Association and all these laryngological societies, international and national, has any one of those organizations before the year 1952 taken any position

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with regard to cigarette smoking as being the cause or a cause or a contributing cause to cancer of the esophagus?

A. They have not.

Q. Have they taken any clear down to the day you are here?

A. Not to my knowledge.

Q. I will ask you whether or not any organization of which you are a member, or connected with, before the year 1952 ever has taken any position that cigarette smoking is the cause or a cause or a contributing cause of cancer of the hypopharynx, the area in which the pyriform fossa is located?

A. They have not taken any stand.

Q. And have they taken any such position clear down to the date of this trial?

A. They have not.

Q. I will ask you whether or not, Doctor, prior to the year 1952, before 1952, any organization of which you are a member or with which you are connected ever took any position that cigarette smoking was the cause or a cause or a contributing cause of cancer of the larynx?

A. They have not.

Q. And have they taken such a position down to the day you occupy the witness stand?

A. Not to my knowledge.

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Q. I will ask you whether or not before 1952 any organization of which you are a member or with which you are connected, has at any time before 1952 taken any position with regard to cigarette smoking as related to cancer of any part of the whole body?

A. They have not.

Q. I will ask you, Doctor, during the years that you were the successor to Chevalier Jackson at the Jefferson Medical College in Philadelphia, and in all of your years of practice as a specialist in this area, and with the over 4,000 doctors and 500 specialists that you trained, if you have ever taught those doctors and those specialists that cigarette smoking is the cause of cancer at any site?

A. I have not.

MR. HARDY: You may inquire.

CROSS-EXAMINATION

BY MR. FIELD:

Q. Doctor, these many organizations that Mr. Hardy asked you about that you belong to, while the subject is still fresh, I wonder if we could call the roll in a little different fashion. He asked you this long question, before the year 1952 whether any organization of which you are a member has ever taken a position that smoking caused or contributed to cause cancer of the pyriform

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fossa, and you stated they have not?

A. Yes, sir.

Q. Now, have any of those organizations, those many organizations that you belong to, before 1952 have they ever taken the position that cigarette smoking does not cause cancer of the pyriform fossa?

A. They take no position.

Q. No position. And since 1952 these many organizations that he rolled off here, have they ever taken a position up to the time you occupy this chair, to use his colorful language, have they ever taken a position that cigarette smoking does not cause cancer of the pyriform fossa?

A. Not to my knowledge.

Q. And then he broadened it and went out into the larynx and asked you the same question, and I am not going to take up the time of the jury on it, but the plain fact is, isn't it, Doctor, that though they haven't taken a position that smoking does cause cancer or contributes to cause cancer, they haven't taken a position that it does not, isn't that right?

A. Yes, sir.

Q. They simply haven't spoken on it?

A. They haven't taken a position.

Q. And usually these societies that you belong to don't

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take positions on such subjects, do they, officially?

A. I think that is right.

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MR. HARDY: Doctor, speak a little louder. I

can't hear you.

A I think that is correct.

Q (By Mr. Field) Of course that is correct. So that wouldn't prove anything one way or the other, would it, Doctor?

MR. HARDY: Just a moment. I will object to that as arguing with the witness and asking for his conclusions. He can ask him what they have done or what they usually do, but now for him to argue his case in that manner --

THE COURT: Objection sustained.

MR. HARDY: He knows he has the burden of proof and he is trying to shift it.

MR. FIELD: O.K. All right, Your Honor. All right.

Q (By Mr. Field) We understand each other, don't we, Doctor? Now, there are organizations, however, national and international in scope, that are devoted to an inquiry, public health and otherwise, on the causes of cancer, aren't there?

A There are, sir.

Q Such as the American Cancer Society?

A Yes, sir.

Q And the American Cancer Society -- by the way, are you --

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have you ever been an officer in that society?

A No, sir.

Q Have you ever been on the board of that society?

A No, sir.

Q Do you know the position of the American Cancer Society, from your knowledge of cancer -- and he went into the whole subject, now, of smoking and cancer any place of the body -- do you know the position that the American Cancer Society has taken with respect to smoking being a direct causative etiological effect in producing cancer in the human body, do you know the position that the American Cancer Society has taken on that in the '50's?

MR. HARDY: Just a moment, Doctor.

If the Court please, I will object to that. It would be admissible only on the question of notice.

MR. FIELD: Well, you went into it.

MR. HARDY: I confined my question with regard to all parts of the body to the time before this man got his cancer.

MR. FIELD: No, you didn't. You said up to the time he sits in this very chair.

MR. HARDY: That is not true.

MR. FIELD: You used that phrase time and time again. You said, "Doctor, up to the very hour that you sit in this chair."

T9s32

MR. HARDY: Are you through?

MR. FIELD: Yes, sir, I am through.

MR. HARDY: All right. I asked him about the sites involved in this case, all the way up to the time he sits in this chair, on the question of notice, because Your Honor ruled that articles pertaining to dust and alcohol and syphilis and smoking and everything else could be put in on the limited question of notice. On the limited question of notice I asked him if before 1952 any organization that he was a member of took a position with regard to cancer at any site of the body in relation to smoking. With regard to the area on which we are concerned with causation, causation of the hypopharynx or pyriform fossa, which Mr. Field has tried to run up the hill and down into the larynx.

MR. FIELD: Oh, Your Honor --

MR. HARDY: I asked him with regard to that and the esophagus which is involved and the larynx, down inside the larynx, because he has brought it into the case, clear up to date.

Now, the other is proper only on the question of notice, and I so limited it and the record will so show. And this is merely a guise to try to put into evidence here -- once again to try something besides the case we have. That is the reason I object to this question.

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THE COURT: He can ask the counterpart of the same question.

MR. HARDY: That is correct.

MR. FIELD: And, Judge, he went into the subject.

MR. HARDY: The counterpart of the same question.

MR. FIELD: He brought the subject up.

Q (By Mr. Field) Now, Doctor, that is the fact, isn't it, that the American Cancer Society has taken the position on --

MR. HARDY: Oh, just a moment.

THE COURT: Just a moment.

MR. HARDY: Just a moment.

THE COURT: I think it might be preferable, Mr. Field, to ask the question in the same steps --

MR. FIELD: Yes, sir. All right.

THE COURT: -- that Mr. Hardy asked, first on the question of notice up until 1952.

MR. FIELD: All right.

Q (By Mr. Field) All right, first I will break it down up to and including 1950 --

MR. FIELD: If you will sit down so I can at least look at the doctor.

MR. HARDY: I like to hear these clever comments describing my picturesque language.

Your Honor, as I understand it, on the question

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of notice of sites that are not involved in this case, Your Honor's ruling is that his question must be limited to the period prior to 1952.

MR. FIELD: No, the Judge said to take it up in the same order you took it up. And that is what I intend to do, Judge.

MR. HARDY: And that is exactly right, and I ask that the record be checked to establish the order I took it up.

MR. FIELD: Oh, my goodness. Is my cross-examination going to be continually obstructed by these tactics, Judge?

THE COURT: I don't mean ordinarily as to the order of the different sites. I was referring to the order of the examination as far as before and up to '52 and then beyond '52.

MR. HARDY: All right. On the subject matter of the direct.

Q (By Mr. Field) Now, Doctor, is it not a fact that by the end of the year 1950, which was one full year before 1952, that at least nine retrospective studies in at least three different countries had found a positive correlation between smoking and cancer? Isn't that true from your knowledge of this field?

A What do you mean, may I ask, of a positive correlation?

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Q I mean a sufficiently strong correlation to list it as either a cause or a probable cause or a strong etiological factor in the production of cancer. Isn't it true that there were nine retrospective studies, including United States, Britain, Germany and Netherlands, that reached that conclusion?

A I don't know the number, but I do know there were some.

Q Yes, sir. And isn't it true now that since 1950 and up until the very hour that you occupy that chair, as counsel so well put --

MR. HARDY: If the Court please, I think we agreed that after he has been over his comments with regard to the way I asked my questions, I will object to this commenting on how I asked my questions and ask his own questions. He is trying to distract attention on some humorous sidelight.

THE COURT: I think he is just paying you a compliment, Mr. Hardy.

MR. FIELD: I thought I was.

MR. HARDY: I am sure he pays me compliments, Your Honor.

Q (By Mr. Field) Up to the very hour that you occupied that chair as defense counsel's first witness, isn't it true that the relationship -- since 1950, now -- that the relationship between cancer and smoking has been agreed to as

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established by the British Ministry of Health, the Medical Research Council of Great Britain, the United States Public Health Service, the United States Study Group on Smoking and Health, which included the American Heart Association, the American Cancer Society, the National Cancer Institute, the National Heart Institute, the National Cancer Institute of Canada, the World Health Organization, the American Cancer Society, the Netherlands Ministry of Health, and most recently the Royal College of Surgeons of London, that those nine public health and official groups in four different countries have not agreed in official reports, to your knowledge, that smoking is agreed to be and established -- have an established relationship with cancer?

MR. HARDY: Now, just a moment, Doctor.

I want to object on the first ground, Your Honor, that his question --

Q (By Mr. Field) I mean cancer in the human body, not just in squirrels or rabbits or ducks, but in the human body, as he asked.

MR. HARDY: Is your question finished?

MR. FIELD: Yes, sir.

MR. HARDY: All right. I object first, Your Honor, for the reason that counsel has covered a period subsequent to the time of Mr. Ross's cancer on the limited

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question of so-called notice.

Secondly, I want to object for the reason that counsel did not -- and once we get past notice -- counsel did not and cannot point to a single one of those reports in which it is stated as being a causative factor of cancer that is involved in this lawsuit or even of the larynx, that counsel has brought in here, endeavoring to prejudice the jury, even the Heart Association, that counsel has referred to a study group, which was in 1957, which specifically said they could reach no conclusions as to larynx and never mentioned pyriform fossa.

MR. FIELD: I object to this as irrelevant.

MR. HARDY: This is --

MR. FIELD: No, wait a minute.

MR. HARDY: Just wait till I get through.

MR. FIELD: No.

MR. HARDY: May I finish, Your Honor?

MR. FIELD: No, I want to object at this time to your jury argument on an irrelevant subject because it is admitted I haven't asked him yet about the larynx or the pyriform fossa. Wait a minute. I am just tracking the very questions he asked when he finally spread-eagled out and said cancer anywhere in the body. And that is what I am tracking and he doesn't like it now.

THE COURT: I might state, it is the opinion of

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the Court that the question has very little probative value, the same as your question on direct has very little probative value. In fact, it has no probative value except as testing the qualification of the witness at this point.

MR. FIELD: Sure.

THE COURT: The issue of notice is settled as of about 1950. But you asked him questions on direct examination, and you brought it up to date, so I think the plaintiff should be entitled to ask the counterpart of those questions.

I was going to instruct the jury both as to your questions on direct and to any questions on cross-examination covering that field, they do not relate to the issue of notice. They only go to test the qualification of the witness.

MR. HARDY: If I may respectfully correct the Court and counsel and refer to the record and stand on the record, that the only questions I asked him bringing it up to date were with regard to the pyriform fossa, the hypopharynx, the esophagus, and the larynx, because he called it larynx. That when I asked him about cancer in the human being, I expressly limited it to the period of 19 -- prior to 1952. This, of course --

And I would like also, Your Honor, in that

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connection to have the privilege of finishing my objections without his constant interruptions when I start to make an objection. If he doesn't like them, he shuts me up.

MR. FIELD: No, all I hope is that I can --

MR. HARDY: Here we go again.

MR. FIELD: No, all I hope is I can cross-examine this witness without you getting up to object to every question.

MR. HARDY: I hope that you can, too.

MR. FIELD: I didn't object to your every question.

MR. HARDY: Now, Your Honor, the additional grounds for my objections:

He is endeavoring to bring into this, under the guise of notice, and bringing it down to today positions that the American Heart Association might have taken -- now, what they have to do with cancer of the pyriform fossa he doesn't show -- the position that someone else has taken with regard, in many instances, to cancer of the lung, and statistical associations, which have absolutely no relevancy and would have no relevancy, except confined prior to 1952. He has, I will say, sneakily put in all of these references that specifically in their content -- and I know their content -- specifically excluded

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any conclusions as to larynx or any other sites. They are just talking about lung. And they only have statistical association, which he now wants to try this lawsuit on lung cancer. And if Your Honor doesn't definitively hold him to the case at bar, we will spend our case talking about lung cancer like we spent his, and that is the ground of my objection.

MR. FIELD: If the Court please, again Mr. Hardy wants to have his cake and eat it all the time.

MR. HARDY: Read the record, if I am not correct.

MR. FIELD: Please, please, at least be courteous, if you can't be anything else in defending this company.

Judge, he wants his cake and eat it. I will agree with the Court that this is relevant, as the Court has patiently instructed the jury, certainly, time and time again, that this is relevant only on the question of notice and, also, as it relates to the doctor's qualifications. But I am trying, in as dignified fashion as I can in representing my client, to track his questions that he asked, and one of them was the big broad stemwinder, "Doctor, up until the time, the very hour that you occupy this chair, have any of these organizations of which you are a member taken any position that smoking causes cancer

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any place in the body?" Now, he has to live --

MR. HARDY: On that I want to stand, Your Honor.

MR. FIELD: He has to live by that, Judge.

THE COURT: Just a moment. I don't recall the testimony, whether his question was general to any parts of the body or whether it was confined first to the specific sites mentioned, of the larynx, the hypopharynx, the pyriform fossa.

MR. HARDY: Your Honor, this is what I would like to request the Court. Mr. Field has made a statement that I want the jury and the Court to see whether it is true or false. I want to go back in that transcript to where I said -- I first asked about the specifics, as Your Honor said, and then when it came to the limited question of notice, I said, "Prior to 1952, have any of these organizations with which you are connected made any statement with regard to cancer in any part of the body?" And I expressly limited it to 1952. Now, he has said I didn't, and I want either to have him confirmed or shown to be absolutely wrong right now.

MR. FIELD: Judge, can I -- is there some way that I can be relieved of the burden of this man --

MR. HARDY: Just be honest about it, that is all --

MR. FIELD: -- upsetting my case in this fashion?

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THE COURT: Just a moment, gentlemen, we are not getting any place.

MR. FIELD: Of course not, and I would like to be relieved of this burden.

THE COURT: I don't recall what the specific question was in that regard. May I suggest we proceed and you can go ahead, Mr. Field, and ask on the specific sites the same as Mr. Hardy did, and bring that down to date, and the broad form question will have to wait on examination of the transcript.

End T9

MR. HARDY: Fine.

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leg  
O-mfl1

Q Now, Doctor, isn't it true that there are few, if any, simple, single causes in biology, and that the fact is that there is most always instead complex situations and environments in which the probability of events occurring or having occurred sometimes increases or decreases, according to the factors in the environment, isn't that true?

A Yes, sir, it is.

Q That isn't just true of cancer, it is true of most of the pathological processes of almost any disease, isn't that correct?

A Those that have no bacterial cause, I would subscribe to that, yes.

Q Even tuberculosis which has a bacillus -- you would even concede that the tubercle bacillus causes tuberculosis, wouldn't you?

A Absolutely.

Q Yet you don't know, nor does any other medical scientists now know just how the tubercle bacillus breaks down the lung tissues, produces cavitation, and so forth, you don't know the mechanical process whereby it brings about this result, do you?

A No, I personally don't.

Q And you don't know of any scientist that does, that is still one of the etiological factors even with such a

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#10-mf12

common disease as tuberculosis, that is not known,  
isn't that true?

A That is true.

Q And furthermore we know you know the very interesting  
experience in the past when we are talking about dis-  
eases, of the Lübeck babies exposed to massive projections  
of tubercle bacillus, and none of them developed tuber-  
culosis?

A Yes.

Q And we know that people, when you talk about environmental  
factors, etiological factors, people, all of us have  
had exposures of tubercle bacillus and it is in our  
lungs but very few of us develop tuberculosis, isn't  
that true?

A That is true.

Q And why that is is due many times to heredity factors,  
correct?

A Heredity --

Q Environmental factors, whether you are raised in the  
slums, whether you have poor nutrition, and so forth?

A Yes, sir.

Q But all these factors, these many complex factors  
surrounding the production of disease, for example, in  
the case of tuberculosis, that doesn't prevent you from  
considering that as one of the etiological producing  
causes of the disease, does it?

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10-mfl3

- A Well, it is the only etiological factor. Tubercle bacillus is the only cause.
- Q And yet all of us get this bacillus in our lungs but few of us develop it, isn't that right?
- A That is true.
- Q So there must be other factors in the production of any disease, isn't that right?
- A Yes, sir.
- Q Now, what is a carcinogen?
- A Carcinogen is an agent which is capable under given or certain conditions of producing cancer.
- Q All right, and so that we make no mistake about that, I want to write that down, because we do have different semantical differences, and I want to be sure I understand it, carcinogen means what again, Doctor?
- A Could I have the reporter read it?
- Q You want to stand on that, all right, certainly, and after she reads it if you want to modify it any, you may.
- A Very well.

(Answer read by the reporter as follows:

"ANSWER: Carcinogen is an agent which is capable under given or certain conditions of producing cancer.")

- Q So would it be fair to say that another way to say what you have said is that a carcinogen is a cancer producing

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T10-mfl4

agent?

A Yes, sir.

Q And that a carcinogen, a known carcinogen, can produce and cause cancer under a certain given set of circumstances?

A Yes, sir.

Q And to that extent you know the cause of cancer, don't you?

A Not specifically.

Q You mean the formal genesis? But if any agent reaches the dignity of being called by doctors a carcinogen though you still don't know the formal genesis, you do know that that carcinogen is the effective producing cause of the cancer under given circumstances, isn't that correct?

MR. HARDY: Just a moment, if the Court please, I am going to object to that question for the reason he says if it reaches the dignity of being called by doctors. There are all sorts of doctors, and unless he confines it to this doctor or a doctor whose opinion he respects, I object to the question as being too indefinite for the doctor to give a definitive answer.

MR. FIELD: Well, he is breaking me up again.

MR. HARDY: I want to ask that counsel be admonished --

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MR. FIELD: I wrote down the doctor's own definition. He knows he can break up my trend of thought and the jury's reception of it by repeated objections.

MR. HARDY: I ask he read what he wrote down and see what he said. When doctors call it carcinogen, it has attained certain dignity. That is not the basis of my objection, what you wrote down. My objection is for you to lump doctors as a whole, and some doctor that knows nothing about it, might call anything a carcinogen. I object to the question for being indefinite, and I ask that the Court admonish counsel to quit sneaking in his snide remarks when I am making legal objections. When I get up to make a legal objection, the Court has previously advised the jury that this is the right of a lawyer in a court of the United States to make a legal objection, and it does not necessarily mean that I am endeavoring to interrupt his aimless cross examination when he is trying something besides this case.

MR. FIELD: When you make objections, you sound like you are in a Justice Court and not in a court of the United States. It is highly improper.

THE COURT: Just a moment, gentlemen, you have a right to make an objection any time you think an objection is in order, no question about that. On the particular question asked, of course I think great

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latitude is generally extended on cross examination, testing the qualification of the witness. The objection is overruled.

Q Doctor, perhaps you still have the question; I have lost it. I am going to ask the reporter to read it, at least to help me and perhaps out of courtesy to you.

(Question read by the reporter as follows:

"QUESTION: You mean the formal genesis? But if any agent reaches the dignity of being called by doctors a carcinogen, though you still don't know the formal genesis, you do know that that carcinogen is the effective producing cause of the cancer under given circumstances, isn't that correct?"

A If a carcinogen is admitted to be a known cause of cancer, then I would agree that you are correct.

Q Yes; and there are a number of things that you know from your knowledge and reading that are carcinogens, aren't there?

A They are suspects.

Q No, that have been proven to be.

A Oh, yes, yes.

Q Not just suspects but that have been proven to be carcinogens.

A Yes.

Q Do you know anything in your reading or knowledge -- I

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T10  
E5-mfl7

will put it the other way. The fact is, alcohol has never been proven to be a carcinogen, has it, by any scientific test?

A No, it hasn't. It has been a suspect, but not a known carcinogen.

Q No; whereas tobacco --

MR. HARDY: Let the doctor finish his answer.

MR. FIELD: Read the entire answer back so the jury can have it twice, read the answer back. I would like to hear it.

(Answer read by the reporter as follows:

"ANSWER: No, it hasn't. It has been a suspect, but not a known carcinogen.")

Q And, Doctor, the fact of the matter is, tobacco smoke condensate or tar has been, to your knowledge, from your reading, scientifically proved to be a carcinogen at least in the case of animals, hasn't it?

A In the case of animals, yes.

Q And whereas alcohol has never been able to be proved as a carcinogen even in the case of animals, isn't that true?

A That is true.

Q So at least we find common agreement when we talk about carcinogens, which you concede are cancer producing, or causing agents under given circumstances, we at least

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find common agreement that tobacco has been identified, and tobacco smoke condensate, has been scientifically proved to be a carcinogen in animals, whereas, alcohol hasn't even reached that status, isn't that correct?

A That is correct.

Q Now, Doctor, next, I want to ask you about this particular type of cancer for a moment -- before we come to that, what is meant when the language is used, "etiological factor"?

A Well, that has been employed variously, in the older literature, an etiological factor has been, and still is, for that matter, considered as the cause; to revert back to tuberculosis, the etiological factor there, or cause, is that bacillus in tuberculosis.

End

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Beg.T 11

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- Q. I want to see if I have got this right. I wanted to write that down to see how much other common agreement we could have. Etiological factor, as I have it, in the older literature, and you said that even the modern literature, for that matter, has been used to mean a cause, is that correct?
- A. Either "a" cause or "the" cause.
- Q. Either "a" or "the". Well, I guess we couldn't have anything more simple than that, "a" or "the". Now, in that connection Hardy asked you, have you ever taught that cigarette smoking was the cause of cancer at any site, and I believe you said no.
- A. I did.
- Q. But speaking about the older literature and the modern literature, to use your language, your teacher was Chevalier Jackson?
- A. Yes, sir.
- Q. And did you use his text book when in turn you taught his students?
- A. His, together with others.
- Q. Yes. So of course "Diseases of the Nose, Throat and Ear", Jackson and Jackson, published by Saunders and Company, Philadelphia and London, in 1945, is truly an outstanding and leading text on the subject?
- A. It is that.

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T11-35W

- Q. And used by you to teach students before you retired?
- A. It was, together with others.
- Q. Now then, specific reference to that text, in talking about etiological factors, which you have defined to mean, in the older and modern literature, for that matter, has been used to mean either a cause or the cause, I quote to you from his text:

"The etiological factors of cancer of the larynx. Irritation may be of many kinds but alcohol, tobacco and vocal abuse are among the more common forms. Syphilis has been mentioned by some writers as an etiologic factor, but is now generally believed to be of no importance in causing cancer of the larynx."

I take it then, Doctor, when you never taught, as counsel asked you, that tobacco or cigarette smoking was the cause of cancer at any site, that you didn't agree and you now don't agree with this text of your old teacher?

- A. No, I did not agree because I did not believe that there was sufficient evidence to support a statement like that.
- Q. I understand.
- A. After all, he says in this that syphilis is no longer considered--
- Q. An etiological factor--

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11-36w

- A. --an etiological factor. Nevertheless, if one goes back far enough in the writings of the beginning of this century, syphilis and even tuberculosis figured very prominently as possible causes of cancer.
- Q. Yes, I understand that. I am talking now about 1945.
- A. I realize that. So fashions and opinions do change with the passing of time only.
- Q. Well, you have never believed that syphilis caused cancer?
- A. I have never believed that, nor do I believe that--
- Q. And your old teacher by 1945 reports that syphilis has been mentioned by some writers as an etiological factor but is now generally believed to be of no importance in causing cancer of the larynx. So your old teacher joined you in 1945 in that respect?
- A. Yes, sir.
- Q. So both you and Chevalier Jackson at least by 1945 ruled out syphilis, didn't you?
- A. Well, we didn't lean too heavily on it.
- Q. You never had leaned heavily on it? But you ruled it out long before 1945 in your own thinking, didn't you?
- A. I did, yes, sir.
- Q. And your teacher ruled out syphilis as being any kind of an etiologic factor and of no importance in producing cancer, he ruled that out by 1945, didn't he? Is that correct?

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T11-37w

- A. Yes, sir.
- Q. Now, at the same time when he ruled syphilis out he included smoking and tobacco in an etiological factor, didn't he?
- A. He did.
- Q. In production of cancer of the larynx, and you disagree with that?
- A. I disagree with it.
- Q. But you still used his text when you talked to your students?
- A. I used his text but I didn't subscribe to everything in the text.
- Q. Why, of course not. But Hardy brought out one side of the coin, I want the jury to know the whole coin. In teaching your students you just didn't teach them your own individual opinions, did you?
- A. Truly.
- Q. You used the standard text, didn't you?
- A. I used that, I say, among others.
- Q. Yes, sir. And this text has gone into its second edition since your retirement, hasn't it?
- A. It has.
- Q. And it is now in its most modern form, W. B. Saunders and Company, Philadelphia and London, 1959. "Diseases of the Nose, Throat and Ear," and you retired in '54?
- A. In '54.

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Q. In this text--and referring now to your specific language of what etiological factor means: "In older and modern literature and my meaning, for that matter, has been used to mean either 'a' or 'the' cause," quoting at page 690, in referring to cancer of the larynx, etiology.

"Irritation is certainly an etiologic factor and may be of many kinds, but alcohol, tobacco and vocal abuse are among the more common forms."

I take it that you do not agree with that?

A. Not entirely.

Q. At least as far as tobacco goes?

A. Yes, sir.

Q. And of course you don't agree with it as far as alcohol goes, do you?

A. I am not so sure that--is this of the larynx or just cancer?

Q. This is the larynx.

A. Yes. I am not so sure that alcohol would figure very prominently as a cause of cancer of the larynx, but I would subscribe to it as a definite suspect in cancer of the pyriform sinus.

Q. Well, we will come to that in a minute.

A. Yes. But I may say in passing that I knew Dr. Jackson very well and he had a remarkable aversion to tobacco

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T11-39w

and alcohol and I would say it was practically fanatical, so that he believed those two items were responsible for many of the ills of the upper air and food passages, and none of his staff were influenced particularly by his decision in connection with that.

Q. O.K. You speak for the other members of his staff?

A. Well, they all drank and smoked. That I can certify to.

Q. Do you still smoke?

A. I still smoke moderately.

Q. Moderately. Did you used to smoke heavily?

A. No, sir.

Q. Do you inhale?

A. No, sir.

Q. Well, in any event, Doctor--by the way, have you ever inhaled?

A. Oh, accidentally possibly, but not willfully.

Q. I thought you didn't, and I want to ask you some questions about that after lunch, when we get into the pterygiform sinus. Well, in any event, then you say that these texts of Jackson--I guess the son was a fanatic too, wasn't he?

A. No, he wasn't, but he didn't participate in the writing of anything prior to '58 or '59?

Q. Oh, I see. But his son wasn't fanatical, it was just

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F11-40w

his father?

A. No, he wasn't.

Q. Is that correct?

A. Not in that sense.

Q. That is right, on tobacco?

A. Yes, because he used both.

Q. Because he used both. Well, isn't that curious? The son wrote the text. "Cancer of the Larynx", that is what I have read to you and it is signed Chevalier L. Jackson. That is the son, isn't it?

A. There are certain aspects of that that one probably shouldn't divulge, but I do know that Jackson, Senior, wrote practically every bit of that text book, nearly every bit of it.

Q. How could he have written it in the 1959 revision?

A. Well, it took him about four years to get that completed. That I know.

Q. Yes?

A. And it took quite a bit for it finally to get out. As a matter of fact, writing a text book--

Q. When did Senior retire?

MR. HARDY: Please don't interrupt him.

Q. (By Mr. Field) I beg your pardon, did I interrupt you, Doctor?

A. No. It takes quite a long time for a text book after

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T11-4lw

this, after it is completed and all the contributors have made their contribution, for it to be published. That is one of the reasons why many people don't write text books because they are rather ancient when they finally appear. But I do know that practically all of this most recent edition was written by Dr. Jackson, Senior.

Q. Had you finished?

A. Yes, sir.

Q. When did he retire?

A. He retired from the clinical practice of laryngology and bronchesophagology in about 1940, I think, or '42. But that was only from the clinical practice. He still was writing while he was confined to the Temple University Hospital and that was his last residence prior to his death.

Q. I am glad to learn that then because I had understood from Mr. Hardy's direct examination that Chevalier Jackson, Senior, had retired in '30 and you took over his place.

A. That was from the Jefferson Medical College.

Q. Oh, yes, I see. But then he stayed in active practice for many years after that?

A. He did. He started a clinic at the Temple University Hospital.

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T11-42w

- Q. So as counsel for the Philip Morris Company brought out, when he retired from teaching in 1930 he then set up a clinic?
- A. He did.
- Q. And worked actively in the clinic for how long?
- A. I would say about ten years.
- Q. Till 1940?
- A. Yes, sir.
- Q. Then how active did he remain after that?
- A. He continued his writings until shortly before his demise.
- Q. And that was when?
- A. Let's see, that was in 19--I am sorry, I can't tell you exactly. It was about 1959.
- Q. At the age of 93?
- A. 93, yes, sir.
- Q. And he continued his writings even from retirement?
- A. Oh, yes, indeed.
- Q. But of course his son was the one that was active after he formally retired, wasn't he?
- A. His son was the one who ran the clinic, yes.
- Q. And the father formally retired when?
- A. I think about 1940.
- Q. Did you want to make a note, Doctor? If you do I will give you time to do it.

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21-43w

A. I was trying a little arithmetical--

THE COURT: Gentlemen, I think we might as well stop for the noon recess.

Members of the jury, we will be in recess until 2 o'clock. Again the Court cautions you not to discuss this case amongst yourselves or with any others or listen to any discussion of it or reading anything if anything appears in the paper.

We will be in recess until 2 o'clock.

End 11

(Noon Recess)

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AFTERNOON SESSION, JULY 2, 1962

LOUIS H. CLERY

resumed the stand and testified further as follows:

CROSS-EXAMINATION  
(Continued)

BY MR FIELD:

Q Doctor, I believe at the noon recess when we left off we were talking about Chevalier Jackson, Senior's retirement. Actually—I call him Senior—his son had a little different name; it's Chevalier L. Jackson. But I suppose, since they were father and son, they were known as Senior and Junior?

A That is right, sir.

Q And I believe, if I summarize your testimony accurately—and to the extent that I perhaps inadvertently don't, I am sure counsel will correct me if you don't—I believe you testified that Chevalier Jackson, Senior, was rather a fanatic on the subject of smoking but that his son wasn't?

A Quite right.

Q Is that right?

A Yes, sir.

Q And his son, so the jury may know something about it, was also greatly distinguished in the field, wasn't he?

A Yes.

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Q What?

A He was, yes.

Q Your teacher, by the way, was Chevalier Jackson. He was really the father of medicine in this area in America, wasn't he?

A In broncho-esophagology, yes.

Q Internationally known all over the world?

A Internationally known, yes, sir.

Q Probably belonged to these same organizations that counsel elicited from you that you belong to?

A He did.

Q And occupying similar positions of eminence in those societies in terms of presidencies and chairmanships?

A Yes, sir.

Q In the congresses and so forth. So I am accurate on it, Chevalier Jackson, Senior, took the firm and unequivocal position in his books "Larynx and Its Diseases," "Cancer of the Larynx"--the senior took the unequivocal position that tobacco-smoking was an etiological factor in the production or causing of cancer of the larynx, didn't he?

A Yes, sir, he did.

Q In fact he taught you, among the other students that he taught, that it was empyreumatic oil from the destructive distillation of the tobacco when it burned, that is, the tobacco tar, that to his belief caused it, didn't he?

A Yes, sir.

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Q When you testified to Mr. Hardy on direct examination this morning, on one side of this coin, that you had taught about 4,000 students during the period that you were teaching and that Dr. Jackson retired by reason of age in June of 1930 as the head of the department--but he continued on, did he not, both with himself and his son, in his clinic until at least 1940, ten years later, didn't he?

A He was at the Temple University Hospital, yes, sir.

Q Were you associated with him in the clinic?

A No, sir. I was associated with him in the teaching of the graduate students only, in that they came to my clinic for some of their work.

Q Yes. So that when we get right down to it, of the 4,000 students that you have taught in your lifetime, various subjects--

A Yes, sir.

Q —use of the bronchoscope, bronchoscopying the lungs, use of the esophagoscope, esophagoscoping the esophagus, looking down in that area, of the 4,000 students that Mr. Hardy brought out on direct examination in the morning that you have taught in your whole lifetime, there were 800 to 900 specialists in the area of the throat, is that correct?

A Yes, sir.

Q And Chevalier Jackson taught those students, too, didn't

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he?

A He did, yes, sir.

Q So we can see the entire side of the coin, they were his students, too?

A They were his students.

Q So these 800 to 900 specialists in the larynx that Hardy brought out in the morning that you taught Jackson also taught, Jackson, father and son?

A Yes.

Q Jackson, father and son, taught them that tobacco-smoking was an etiological factor--that means either a cause or one of the causes of cancer of the larynx--didn't he?

MR. HARDY: If the Court please, with regard to Jackson, father and son, while it is I think perfectly proper to use their books as Mr. Field has on cross-examination, for Dr. Clerf to be called upon to say what Dr. Jackson and son taught is calling for hearsay as to what they did.

Q (By Mr. Field) Only if you know. Now, he went into the subject about teaching these students. You do know what they taught, don't you?

MR. HARDY: They are not witnesses and haven't been.

THE COURT: Just a moment. I think it is going pretty far afield.

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MR. FIELD: If you don't feel-- It's not of great moment.

Q (By Mr. Field) In any event, you did testify before noon recess that the son, Chevalier L. Jackson, equally distinguished--

A Yes, sir.

Q --was not a fanatic on the subject of smoking?

A He was not.

Q Of course the father and son had written other texts, but their great treatise entitled Diseases of the Nose, Throat and Ear didn't come out until five years after the father, that you called your teacher, the fanatic, had retired, did it, 1945?

A About five years after, yes, sir.

Q And it was the son, who was not the fanatic, that wrote the section in this text, Chevalier L. Jackson, where he said that "Irritation may be of many kinds, but alcohol, tobacco and vocal abuse are among the more common forms" when he was talking about the etiological factors in the cancer of the larynx, wasn't he?

A Yes, sir.

Q So on the two treatises in the first edition and the second, it was the son, not the fanatic, who wrote this into the book, wasn't it?

A That is questionable, in that, as I indicated before

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luncheon, Dr. Jackson, Senior, did most of the writing in which he participated. For example, I was co-author with him in several articles myself, and I first read those when they appeared in the literature, yet my name was appended to them.

Q Oh, yes, I understand that, Dr. Clerf. But it is obvious that in this same book we have been talking about when the father wrote the article he signed it himself, Chevalier Jackson, "Noninfective Acute Laryngitis"?

A Yes, sir.

Q But when the son wrote the article, he signed it himself, didn't he?

A I question that, as I stated before, in that I am of the opinion that much of that material will compare favorably with similar chapters in other books.

Q By the father?

A By the father.

Q Oh, yes, I am certain of it.

A And I am also of the opinion that the father wrote a goodly number of the chapters, notably the one that you were referring to, and he put his son's name at the bottom of it as being the author.

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- Q. You don't know that that was done in this particular case, but even assuming it was done in that particular case.
- A. I am willing to concede it.
- Q. You are willing to concede that the son shares the view of the father, aren't you?
- A. Yes, I am willing to concede that he shares the view of the father insofar as the writings are concerned, but in practice I don't believe he did.
- Q. Are you saying from that you mean that he smoked?
- A. I say in practice I don't believe he shared his father's view.
- Q. That smoking was an etiologic factor in cancer of the larynx?
- A. Yes, sir.
- Q. Did he ever write anything that indicated that he didn't share his father's view?
- A. No, sir.
- Q. So you only have that on oral belief?
- A. No, purely a matter that actions speak louder than words.
- Q. What? That he smoked?
- A. Yes, sir.
- Q. Is that all?
- A. Well, that--
- Q. Is that all, Doctor?

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- A. Yes, that is it.
- Q. The mere fact that he smoked wouldn't indicate that he didn't believe his father, would it? He obviously, from what you have just said, never told you that he didn't believe his father on that subject?
- A. No, he didn't.

MR. HARDY: If the Court please, I think counsel is going away beyond the proper use of text books to cross-examine the witness. He is asking Dr. Clerf to give the subjective beliefs of people who are not here. Their beliefs are illustrated in their writings, which he cross-examined with, and it is improper for him to ask him what their views were, is calling for hearsay and conclusion.

THE COURT: I think it is calling for hearsay on his views. But of course all of this type of testimony has no probative value, just goes to the qualifications of the witness.

- Q. (By Mr. Field) I think he made it clear. You said the only thing you based that on was just the fact that he smoked, didn't you?
- A. Yes.
- Q. And he didn't smoke heavily, did he?
- A. I would consider him a heavy smoker.
- Q. Doctor, these great big blowups that the defense has

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13-46w

here of this thing, it is a rather horrible looking thing even in normal size. Now, how much is this enlarged over the area that it actually existed?

A. I don't know, sir.

Q. You couldn't even hazard a guess, but you know it is tremendous, don't you?

A. It is blown up, there is no question about that.

A. Yes, and of course these tissues which are dated up here, the date when these photographs were taken, I asked to have this written in here, were taken in 1960, one at the direction of Dr. Ackerman, one of the defense doctors, the other of Dr. Parkhill in 1960. That is the larynx that was taken out of this man's throat?

A. Yes, sir.

Q. And preserved in a bottle for eight years before this work was done, isn't that right?

A. If those are the dates, yes.

Q. Well, those are the dates on here, 1960, and we know it was taken out in '52.

A. Yes, sir.

Q. Now, this specimen, such as it is, it has been preserved in a bottle there for eight years, one place it has been pulled apart, hasn't it? The larynx has been pulled apart?

A. After the cricoid was sectioned, yes.

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T13-47W

- Q. And the cricoid was sectioned, from what you know of this case, by Dr. Ackerman, wasn't it?
- A. I really don't know.
- Q. Don't you know who took this block out here?
- A. Well, I don't know who took that out either, no, I don't know.
- Q. Have you had any conferences with the other doctors in this case, the other defense doctors?
- A. I have had an opportunity to examine the photographs. I have had an opportunity to see the histologic reports and I have heard of Dr. Ackerman's diagnosis. I took it based on his histologic studies.
- Q. I guess you didn't get my question. My question was have you had any conferences with the other defense doctors in this case?
- A. I have been talking to them, yes.
- Q. When?
- A. I talked to Dr. Ackerman on--I guess it was last Thursday, Friday--I don't recall which day it was now.
- Q. Where?
- A. Here in the city.
- Q. Oh, really? And what other defense doctors did you talk to on that day, last Thursday or Friday?
- A. I don't believe I talked to anybody else. I saw Dr. Ogura.

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T-3-48w

- Q. When?
- A. And I don't recall whether that was on Thursday or Friday.
- Q. He is another one of the defense doctors?
- A. Yes, sir.
- Q. Have you been in conference with any other of the defense doctors other than Ogura and Ackerman?

MR. HARDY: I object to that for the reason he testified he was in conference with Dr. Ackerman and he saw Dr. Ogura, misquoting the witness.

- Q. (By Mr. Field) All right, have you been in conference with any of the other defense doctors other than Dr. Ackerman and Dr. Ogura?

A. No, sir.

- Q. Have you seen any of the other defense doctors other than Dr. Ackerman and Dr. Ogura?

A. I saw a chap today, I don't know whether he is a defense doctor or not, I don't even know his name.

- Q. So you wouldn't know whether he is a defense doctor or not?

A. I wouldn't know whether he is a defense doctor or not.

- Q. So the only conference you ever had with the defense doctors was last Thursday or Friday with Dr. Ackerman?

A. Yes, sir.

- Q. Never had any conference with him at any other time?

A. Not on this case, no.

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T-59w

- Q. And did you learn from Dr. Ackerman that he had cut this out in--
- A. I wasn't certain who had cut it out. I knew that he had taken a section, that he had examined it, and had conferred in the diagnosis.
- Q. All right. Now, of course this horrible big specimen here, this doesn't begin to show the jury the relationship of this larynx as it lies in the throat, does it?

MR. HARDY: If the Court please, I will object to counsel continually describing this as a horrible, big section. He didn't make any objection when we offered it in evidence.

MR. FIELD: I can still describe it--

MR. HARDY: That is no part of a proper question for him to keep repeating "the big horrible specimen."

MR. FIELD: You kept talking about bootleg whiskey all during this case. You don't mind these terms.

THE COURT: Gentlemen, let's get on with this examination.

MR. HARDY: What does that have to do with this?

MR. FIELD: The same thing you are doing.

MR. HARDY: What does that have to do with this case?

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T13-50w

- Q. (By Mr. Field) Doctor, this specimen, such as it is, enlarged as it is, this doesn't begin to show us the relationship of the larynx as it lies in the throat, does it?
- A. Obviously not, because it is depicted on a flat surface.
- Q. And it doesn't show how it fits in the throat either, does it?
- A. No, it does not, because the throat is not present.
- Q. Yes. In the conferences that you had with Dr. Ackerman or in the talk that you had with the other defense doctor, Dr. Ogura, or in any of the conferences that you had with the attorneys for the Philip Morris Company, have you gone over any medical charts or anatomical charts that would show the relationship of this larynx to the rest of the throat?
- A. No, sir.
- Q. All right. Then maybe I can supply one so we can show the jury. Of course anatomical charts are recognized methods of teaching, if they are accurately drawn, to illustrate the position and area it occupies in the body?
- A. Yes, sir, provided they are not too schematic.
- Q. Why, certainly. Provided they are accurate.
- A. Yes.
- Q. And of course you know that Nystrom and Company of

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Chicago is the finest maker of anatomical charts in America, don't you? You know that, don't you?

A. Well, I am not certain that they are the finest.

Q. Well, one of the best?

A. They do make some very excellent charts.

Q. Why, certainly. And of course you used them for years before you retired, didn't you, Doctor?

A. Oh, I did use them.

Q. Yes. Then I want to show you a Nystrom chart, so that we can show the Court and jury the relationship of this pyriform fossa and the larynx as to the tissue. Do you see this?

A. Yes, sir.

Q. A. J. Nystrom and Company, publishers. This isn't any schematic cross-section, that is a very accurate cross-section, isn't it, this particular one here?

A. I think it is reasonably accurate.

End 13

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MR. FIELD: I offer in evidence Plate No. 7 from A. J. Nystrom & Company, publishers in Chicago. I would like leave to have it marked by a paper clip because I got it from the Mayo's Clinic and I don't think they would want me to mark up their chart.

Will you paper-clip an exhibit number on? If that is all right with you, Mr. Hardy.

MR. HARDY: I have no objection to your using a paper clip on it.

(PLAINTIFF'S EXHIBIT 54 WAS MARKED FOR IDENTIFICATION.)

MR. HARDY: But I will say that the chart has not been properly identified, that although plaintiff had already put on his case he had no one identify this chart, and for the reason that, unless it is shown by someone who can say that this is an accurate representation of the anatomical condition that exists in the throat, that I object to it on the grounds that it is not properly identified.

I don't know why he didn't show that to his doctors. He told me before the trial he had --

MR. FIELD: Judge, I object to all this as highly improper, why I didn't show it to my doctors, and I am going to for once try to stop it. It hasn't anything to do with the doctor saying this is an accurate chart.

THE COURT: I don't think it makes any

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T14s44

difference if that is an accurate chart.

MR. FIELD: The doctor said so.

THE WITNESS: I am sorry, I didn't say it was accurate. I said it was reasonably accurate.

MR. FIELD: Reasonably accurate, yes, sir.

MR. HARDY: And in addition I want to point out that he just voluntarily said, "I got it from Mayo's" What testimony is there to that effect?

THE COURT: There is no testimony, but it doesn't make any difference.

MR. HARDY: And he complains about my improper comments.

The question is, is it accurately identified as being an accurate document?

THE WITNESS: My feeling is that all of these charts are constructed for one purpose only, and that is to give the student a view of the material or the anatomy or whatever your exhibit, and in that sense the majority of them are schematic. I have emphasized that before.

Q (By Mr. Field) I am sure you have.

A Because I was asked to provide a drawing of the larynx and I said it would be utterly useless, since it would be a schematic illustration of the larynx and that is all. There is only one thing that I could accept as

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T14s45

being -- well, I would say in evidence. I am stretching that a point. But actually, photographs I will accept.

Q Oh, well, certainly. I am not saying that this is John Ross's larynx or anything else.

A No, no, actual photograph.

Q But you do know that this is a reasonably accurate representation of a cross-section of this area, isn't it? Isn't that correct?

A I will say it is a reasonable.

MR. FIELD: All right. I offer in evidence Plaintiff's Exhibit 54, and with particular reference to Figure 5, "Horizontal Section of the Neck."

MR. HARDY: I would like to state, also, for the record, Your Honor, insofar as the exhibit is concerned, I make no further objection, but on this -- I do want to object in the record to the fact that counsel, in advance of trial, advised counsel for the defense that before offering this chart, which he told me about, he would let me observe it out of court, and that this morning, at his request, we did that with the blown-up photographs in Your Honor's chambers. And I want, for the purposes of the record, to show that contrary to that agreement he whipped it out here for the first time, without ever letting me see it.

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MR. FIELD: That isn't true, either. I told

T14s46

him --

MR. HARDY: That is true to the word.

MR. FIELD: Well, Judge, I hate to disagree factually on something with Mr. Hardy. I don't mind arguing with him, but I hate to say that he is factually wrong. I have to say he is; maybe I can pull him back.

The thing I was talking about which I showed his colleagues was a much larger drawing by an artist, as I told them, from Mayo's of this area, and I said that if I was going to use that I would show that to them ahead of time. I wasn't referring about the Fystrom chart, which, of course, is a standard chart.

THE COURT: Well, the chart is introduced solely for the purpose of information --

MR. FIELD: That is correct --

THE COURT: -- of the general anatomical structure of the larynx.

It will be admitted.

(PLAINTIFF'S EXHIBIT 54 WAS RECEIVED IN EVIDENCE.)

Q (By Mr. Field) Will you come over here now, Doctor. And, doctor, if you would stand to the other side so that the jury can see this.

The pyriform fossa, by definition, is a space, is it not?

A A space or sulcus.

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T14s47

Q And when it is called sometimes a sinus, that refers to a space, doesn't it?

A That's right.

Q So, No. 1, it is not an organ, is it?

A It is not an organ, no, sir.

Q It is simply a space. And you couldn't even have a cancer of a space, but you could have a cancer involving the pyriform sinus, couldn't you?

A Yes. That is true.

Q Now, pyriform, by the very definition, means -- the word "pyriform" means either pear-shaped or pyramidal, doesn't it?

A Yes, sir.

Q And this refers, when you talk about the pyriform sinus in the throat, this refers to this pyramidal pear-shaped trough that lies at either side of this voice box and at the base of the tongue, doesn't it?

A Not at the base of the tongue. It is lateral to and behind. So it is -- it is the base of the tongue if you go back far enough.

Q Yes, that is what I want to do.

A Yes.

Q And I want to begin by the jury looking at this chart here. This (indicating) is the tongue, isn't it?

A Yes, sir.

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T14s48

Q And this is a hook (indicating) drawn in there to show that the tongue is being pulled down, isn't it?

A That is right.

Q These are the molars (indicating), aren't they?

A Yes, sir.

Q Of the lower jaw as shown?

A Yes, sir.

Q Now, this is simply a cross-section through the entire neck at this level, isn't it?

A Yes, sir.

Q In fact, that is the spinal vertebrae there (indicating), isn't it?

A Yes.

Q And the spinal cord?

A That is right.

Q Now, this is the vocal cords right here (indicating), isn't it?

A Yes, sir.

Q And this (indicating) is the epiglottis, isn't it?

A Yes, sir.

Q And there is the base of the tongue (indicating), isn't it?

A It is.

Q And this pear-shaped area or triangular area right there (indicating) that I am outlining -- can you all see that? --

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T14s49

those two are the pyriform fossa, aren't they?

A The pyriform fossa is lateral to the larynx. This does not participate in the pyriform fossa.

Q Oh, this area up here (indicating) does not participate in the --

A That is a part of the hypopharynx, but it is not the pyriform fossa.

Q So the pyriform fossa is right in this area (indicating)?

A It is lateral to or alongside of.

Q Yes. This is the gullet right here (indicating), isn't it, or esophagus?

A Yes, that is the beginning of the esophagus.

Q Right there (indicating), is that correct?

A Yes, sir.

Q And this (indicating) isn't pyriform fossa right next to the gullet, then, is it?

A It is the hypopharynx.

Q It isn't pyriform fossa, is it?

A It is not.

Q The pyriform fossa is right here (indicating)?

A Yes, sir.

Q Now, since the pyriform fossa is a space, it has to be bounded, then, by tissue, doesn't it?

A Yes, sir.

Q And what tissue is it that forms this (indicating) boundary

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T14s50

of the pyriform fossa?

A That is the aryepiglottic fold.

Q Is that also the outside of the larynx?

A It is the outer boundary of the larynx.

Q All right. So that is laryngeal tissue here (indicating), isn't it?

A Yes, sir.

Q That forms one of the sides of the pyriform fossa, isn't it?

A Yes, sir.

Q Is laryngeal tissue, isn't it?

A Yes, sir.

Q And this is where John Ross had his cancer, isn't it, this laryngeal tissue right here (indicating)?

A No, sir. No, sir. He had his cancer in the pyriform fossa.

Q Yes. But the pyriform fossa is a space. It would have to be tissue, wouldn't it?

A Yes, sir.

Q And isn't this outer laryngeal tissue right here (indicating)?

A No, that is -- you see, you are pointing to the pyriform fossa --

Q Yes, sir --

A -- here (indicating).

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T14s51

Q Yes, sir.

A The larynx is here (indicating). It is on the inside of the aryepiglottic fold.

Q Yes, I understand.

A The larynx is on the inside. This growth is on the outside.

Q I understand that. But this tissue that forms the boundary of the larynx is laryngeal tissue, isn't it, I mean the boundary of the pyriform fossa?

A The inner wall is, yes.

Q Why, certainly.

A But the outer wall isn't.

Q No, I understand that. Now, the area of John Ross's cancer was in here (indicating), wasn't it?

A It was in the pyriform fossa. I can show it better here.

Q Well, let's show it on here first.

A Well, it is difficult to here, because you can't get depth.

Q Yes.

A But it is below the border of the aryepiglottic fold in this space down here (indicating).

Q Well, show the jury on here where it was.

A Well, it is on the outer side of that fold (indicating) that we referred to as being the inner wall of the cavity of the larynx.

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T14s52

Q And that is laryngeal tissue, isn't it?

A It is pharyngeal tissue.

Q Yes.

A Pharyngeal, not laryngeal.

Q And called by some laryngeal-pharyngeal tissue, isn't it?

A No. They speak of -- you see, they speak of this space as the laryngopharynx or the hypopharynx.

Q Those terms are interchangeable?

A Yes, sir. Now, the hypopharynx or the laryngopharynx contains the larynx and it also contains the pyriform sinuses.

Q Yes, sir. Now, those pyriform sinuses are then immediately adjacent to the larynx proper, aren't they?

A They are on the outer wall of the larynx.

Q Yes, sir, the pyriform sinus.

A Yes, sir.

Q On the outer wall of the larynx. Now, that is also known as the median wall of what?

A The outer wall of the larynx is also known as the median wall of the pyriform sinus.

Q And it was on the median wall of the pyriform sinus that this man's cancer was found, wasn't it?

A Part of it.

Q Yes, sir.

A Part of it was on the outer wall and part of it was at the junction of the medial and outer wall.

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Q Yes, sir. All right. Now, when you referred, under the questioning of the defense counsel on your direct examination, to a party wall here --

A Yes, sir.

Q This party wall doesn't go clear to the ceiling, so to speak, does it?

A No, sir. No, sir.

Q And this space that lies, as you have acknowledged, that begins almost at the base of the tongue on either side, this space is completely open in the throat, isn't it?

A It is open above.

Q Yes, sir.

A Yes, sir.

Q And, in fact, I am sure you taught your students, did you not, Dr. Clerf, that no examination, visual examination, of the larynx is complete until you have examined the pyriform fossa?

A That is true.

Q Yes, sir.

A That is true.

Q And, of course, that space lying as it does there -- you take the pointer. I want to see how well -- I noticed Mr. Nerdy back here, and I don't object to him being here. I just want to see how well that reads back here,

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that area, because it is quite a ways.

Now, Doctor, Mr. Hardy asked you, and would you point to this area of the pyriform fossa where it first begins at the base of the tongue? Let's see how that reads here. No, no, on the other one where the tongue is.

A (Indicating).

Q That is where it begins. Is that virtually the base of the tongue?

A There is a space, a depression, here (indicating) in front of the epiglottis, which we call the vallecular, or the little valley, and then behind that there is this ligament (indicating) which is a ligament running from the epiglottis to the lateral wall of the pharynx. You can see it there (indicating). And then immediately behind that is the beginning of the pyriform sinus.

Q Now, there isn't any obstruction between the base of the tongue in that area that you have pointed out and the beginning of the pyriform sinus, is there?

A There is no obstruction, no.

Q No. The two flow right into the other, don't they, back in the throat?

A There is just a little elevation here (indicating), that is that ligament I speak of --

Q Just a little hump?

A It is a little -- yes, it is a slight ridge that is

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visible on each side.

Q Yes.

A As you can see it right here (indicating).

Q No, let's stay on the one to the other side there, Doctor.

A Yes, sir.

Q So there is no obstacle at all, other than this little hump or ridge from the base of the tongue, for anything to flow right into the pyriform sinus, is there?

A There is nothing, no.

Q Either liquid or air, is there?

A No.

Q Now, I believe you testified on direct examination in response to many, many questions that when one inhales the vocal cords close -- the vocal cords open, and that this sinus either obliterates or closes up to a considerable extent, is that right?

A Yes, sir.

Q Now, first I want to ask you, it doesn't completely obliterate in all persons, does it?

A Well, to all intents and purposes it does. There is a very narrow groove. That is why I say this is a schematic drawing, because I have never seen a hypopharynx in cross-section that looked like that. I have never seen this offset here (indicating) in any living subject or in any post-mortem subject that I have seen. That is entirely

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exaggerated.

Q Now, when is the pyriform sinus open?

A The pyriform sinus is open when --

Q That is, completely open.

A -- as widely as one can open it, I would say when you say EEEEEE, and that is when we examine the larynx with the tongue pulled out, with a mirror there. We can see it widely open.

Q Are you vocalizing at that point?

A Yes, sir.

Q Because you are saying EEEEEE?

A Yes. That is when you bring the two vocal cords closely together, and we would like to have them say EEEEEE as high as they can get it in order to get the maximum approximation --

Q Yes --

A -- of the vocal cords. And then, also, when an individual swallows, the larynx closes and the pyriform sinus opens sufficiently to allow a bolus of food to go down. That is why I say probably, in answer to your question, the maximum opening of the pyriform sinus would be when one pitches the larynx to the highest possible tone, an E.

Q All right. Now, would you resume your seat? I don't want to keep you standing. Actually, only attorneys have to stand up all the time when talking to the witness.

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T14s57

Now, Dr. Clerf, have you ever made any tests, either scientific or practical, to determine whether or not smoke from cigarettes can get into the pyriform sinus area on either side or both?

A I have not made any tests personally.

Q Do you know of anybody that has?

A Yes.

Q Who?

A Dr. Arthur Proetz has done some experimental work in that field.

Q Have you been advised in your consultations with the defendant lawyers, or any of their doctors, that any of the defense doctors have made any such tests?

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A No.

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- Q. Now, let's see. You said that you smoked, but you didn't inhale?
- A. Quite right.
- Q. Have you ever tried to inhale?
- A. Oh, I have done it several times during my lifetime, but I found it undesirable.
- Q. Why?
- A. Because it makes me cough.
- Q. Irritates your bronchial mucosa?
- A. I don't know what it is, but it makes me cough.
- Q. You are not able to diagnose your cough, except that you do know it is caused by cigarettes?
- A. By smoke.
- Q. From cigarettes?
- A. Or tobacco, pipe, cigar. As a matter of fact, I don't smoke enough cigarettes to know much about them.
- Q. Now, the thing I want to come to is this. Since you don't inhale, but you say you did inhale, how long ago was it? This may seem a little strange, but you bear with me, Dr. Clerf. How long ago was it when you first tried to learn how to inhale? When you were young?
- A. Yes.
- Q. And you do know, don't you, that you can't inhale like that (demonstrating)?
- That would not only make you cough, but would give you

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almost a laryngeal spasm, wouldn't it?

A. It would.

Q. And when anyone smokes or inhales a cigarette you know that you first suck on it or drag and pull it into your mouth--

A. Yes.

Q. --and your throat area, and you hold it there and then you inhale it after you have got it into your mouth and throat, don't you? You know that, don't you?

A. I am not certain just whether I understand that, sir.

Q. I will go back over it.

A. Yes, please.

Q. And that is the thing I want to get to, because Mr. Hardy asked you so many questions on direct examination, Does this smoke get into the pyriform fossa when you inhale, and you said No, it doesn't, because the larynx raises up and--I mean the vocal cords open and that closes up the space when you inhale, but you do know that you can't take a cigarette or a cigar and pull it in like that (demonstrating) because it would put an awful burden on your vocal cords and your lungs, wouldn't it?

A. If you did it like that, probably would.

Q. And when you first learn to inhale you have to first learn how to suck or draw or drag the smoke into your

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mouth, and then after it gets into your mouth and into your throat, then you use this bellows of your diaphragm and your lungs to pull it on down through the larynx, don't you?

A. I am sorry, I can't--I wouldn't say I can't agree, I don't know. I have never visualized myself doing it that way. I was under the impression that when people inhale a cigarette they start inhaling comparatively early in the drawing in of the smoke. Now, I may be in error about that.

Q. No, Doctor, I am not denying that, but I am saying if you had inhaled all your life, you still can't take a cigarette and go (demonstrating), pull it right straight down like that, can you?

A. No, not that quickly or not with that much energy.

Q. Because you know what it would do to your vocal cords--you haven't got that much energy?

A. I said no, not with that much energy.

Q. Well, perhaps that is a little exaggerated. Teaching is sometimes a little exaggerated, isn't it? But let's say like that (demonstrating). You don't smoke cigarettes that way and inhale that way, do you?

A. I am not in a position to answer that yes or no.

Q. But if it is a fact, and you don't inhale, if it is a fact that in smoking that you first have to suck or draw

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that smoke from the cigarette into your mouth and throat and hold it there and then when you get the volume filled in your mouth and throat, then you pull it down, if that is a fact, before those vocal cords open up, the pyriform sinus would be bathed by that smoke that you held in your mouth and throat, wouldn't it?

A. I am of the opinion that if you, as it were, herd this smoke into your mouth--

Q. Not herd it, just suck it in.

A. Well, and then when you secure enough, you then breathe in--

Q. Yes, sir.

A. --I would be of the opinion that probably you would block off your mouth from the back part of the throat with your soft palate. We sometimes do that maneuver when we want to drink something and when we do that we do hold the material in our mouth and the mouth becomes a closed cavity in the back, and then when we are ready to swallow, we swallow. Now, the same can be said with regard to smoke, if what you say is true, we probably then don't have any interchange of air behind the soft palate, the epiglottis, and the base of the tongue, until you get a mouthful, and then when you inhale, then of course the larynx opens widely and the smoke descends into the trachea.

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- Q. But until you inhale the larynx doesn't open widely, does it?
- A. If what you say is true, then the larynx is not opened widely, no. It is not opened widely.
- Q. That is the question. The fact of the matter is, Doctor, until you actually perform the act of inhaling your larynx isn't open widely, is it?
- A. Well, no, not until you inhale deeply, no, the larynx isn't open widely.
- Q. Of course not.
- A. But the concession that I cannot make or appreciate is that you store this tobacco smoke in your mouth until you feel that you have gotten a load, and then you draw it down into the lung.
- Q. I am not talking about storing, I didn't even mean to infer that this is a conscious process of storing smoke, I am simply saying to you, Doctor, that when anyone seeks to inhale that they cannot inhale directly from the butt end of the cigarette but they first must suck it into their mouth and throat cavity before they begin the act of inhalation, that is all I am saying, that that is the normal way of dragging on a cigarette.
- A. Yes. Well, I will agree on that.
- Q. And it would only be a glasseater or smoke freak that could take a cigarette and just pull it straight on down

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(demonstrating)?

- A. That is true.
- Q. And the only thing that you can think of that would prevent that smoke then, before the vocal cords open up, the only thing that you think that could prevent that smoke from entering the pyriform sinus area would be the soft palate?
- A. No, no, I thought we were storing it up in the mouth. The soft palate has nothing to do with the pyriform sinus.
- Q. And of course the soft palate couldn't prevent this smoke from filtering down from this open area (indicating) into the pyriform sinus, could it?
- A. No. It was not involved in this.

MR. HARDY: What is that last answer?

- A. The likelihood is that if, as he indicated, one doesn't store the smoke, then the soft palate is non-operative, but the larynx is not closed and the larynx is open at all times then.
- Q. I understand, but you did say awhile ago, Dr. Clerf, and if you don't mind I would like to hold you to it, unless you want to change it, you did say awhile ago that it isn't until you start the actual act of inhalation that the larynx opens up?
- A. I think you made that statement.

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T15-58w

MR. HARDY: Yes.

- A. I think you made the statement. I didn't subscribe to that, I felt that during the act of smoking smoke is not stored anywhere, but it is slowly sucked down into the air passageway and the larynx during all of that time is open.
- Q. (By Mr. Field) Let's see if you really believe that.
- A. I am convinced of it.
- Q. Well, let's see if I couldn't change you on it.
- A. No, indeed.
- Q. Would you welcome a little questioning on it?
- A. Indeed.
- Q. Are you saying that when one first takes the smoke from the end of a cigarette that you are actually using your bellows, your diaphragm or your lungs, or is that a sucking act?
- A. I am not certain what it is.
- Q. Yes. I didn't think you were.
- A. But I do maintain that the larynx does not close because of any action that may be taking place in the mouth.
- Q. I understand that, but we will come to that. I suggest to you, Doctor, that when the smoker takes smoke into his mouth from the lighted end of a cigarette he first sucks or drags it in?

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T15-59a

- A. Yes.
- Q. Just as you take a straw and suck water up from a soda?
- A. Yes, sir.
- Q. And you don't use the bellows of your lungs or your diaphragm to first pull that smoke into your oral cavity? Don't you agree with that?
- A. Yes.
- Q. And obviously that is the way you must smoke, if you don't inhale?
- A. That is true.
- Q. Now, second, the only thing that would prevent that smoke, when you perform that sucking motion, before you started to inhale, the only thing that would prevent that smoke from filling this entire cavity I think you suggested might have been the soft palate?
- A. No, I misunderstood your original statement. But I will say this, that when you do your sucking act that is purely an action that is produced by the cheeks, the tongue, and the floor of the mouth.
- Q. Sure.
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- MR. HARDY: Don't interrupt him.
- Q. (By Mr. Field) All right.
- A. And there are no tissues in the pharynx that participate in this. Therefore, there is no smoke goes into the back part of the throat overlaying, we will say, the

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larynx. There is no smoke gets in that area.

Q. When you suck, your lips come together?

A. I agree.

Q. Where does the smoke go then?

A. In your mouth.

Q. It isn't going in the area occupied by the lips?

A. It goes into your mouth.

Q. Yes, sir, and there is nothing to prevent it when it goes into your mouth to flow back along the tongue here into the pyriform fossa?

A. There is no reason why it should go back, though, because that is already occupied by air, you see.

Q. But doesn't smoke immediately infiltrate into any area--

A. Oh, yes, it does to a certain extent.

Q. Certainly, and that is the point I am coming to, except for the air that is already here, before you start to inhale, this smoke will go in there and fuse or meld with that existing air in there, won't it?

A. To a limited extent.

Q. Yes, sir. So the pyriform sinus before you inhale is exposed to smoke to that limited extent on your belief, isn't it?

A. Only the upper part.

Q. All right. What prevents it from getting beyond the upper part?

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A. The contact of the lateral wall of the larynx lying in contact with the pharynx.

Q. You do then concede that to that extent the smoke does invade the pyriform fossa, doesn't it?

A. Upper part only.

Q. Now second, even you, I believe, will concede, Doctor, that these empyreumatic oils that your teacher used to speak of, or that we call nowadays tars--

A. Yes, sir.

Q. --that these things do combine in the saliva of the mouth, don't they?

A. Yes, sir.

Q. And we do know, as Counsel has so well brought out, that when you perform the act of swallowing the saliva goes right down this trough, doesn't it?

A. Yes, sir.

Q. Laden to a certain extent with tobacco tars, if you have been smoking?

A. That is right.

Q. So as even you have conceded, smoke gets in there frequently, and the second way, tobacco tars concentrated in the saliva also bathe that area, don't they?

A. They do.

Q. But you never made any test to determine or you don't know how much, do you?

A. No, sir, I do not.

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- 217 Q And one thing certain, one thing more, is it not, Doctor, is that the smoke does infiltrate here and joins the existing air in the pyriform fossa area, before you inhale; one thing is certain, that that smoke is not moving very fast, is it?
- A I don't know. I don't believe it is.
- Q Why, of course not. It would be merely mixing with existing air?
- A Yes. Yes.
- Q And the particles within it, the smoke particles, would have an even greater tendency to precipitate because it is slow moving and almost stagnant, wouldn't they?
- A Might.
- Q Doesn't that make common sense to you?
- A Well, yes, it does; if it isn't in motion, then it would precipitate.
- Q Or if it slowed down it would precipitate, wouldn't it?
- A Yes.
- Q Whereas where you then inhale and perform this act, as you have put it so well, use the bellows of your diaphragm or your lungs to then pull it down your windpipe, then the smoke speeds up as it passes through the larynx, does it?
- A It does.
- Q Again. And it only slows down till it finally starts

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eddying and swirling in the bronchial tissue, is that right?

A Right. Yes, sir.

Q By the way, do you have a belief that at these areas where smoke slows down and eddies and whirls, like in the bronchial tissue--won't you concede that that causes cancer or tends to cause cancer of the tissue in that area?

MR. HARDY: Just a moment. If the Court please, I understood his question to apply to the bronchial tissue.

MR. FIELD: That is correct.

MR. HARDY: I understood his immediately previous questions to apply to the pyriform fossa.

MR. FIELD: That is correct.

MR. HARDY: I object to the question with regard to the bronchial tissue for the reason it is outside the issues in this case.

MR. FIELD: He acknowledges that when it reaches the bronchial tissues it eddies and whirls. I want to show by him that smoke eddying and swirling in that area produces or tends to produce cancer.

MR. HARDY: My objection is that this is a pyriform fossa case and I think counsel should stick with

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the area where the cancer occurred and try the case on the issue that is here rather than to try smoke or anything else in some other area.

THE COURT: Well, I think the witness testified on direct that in his opinion smoking did not cause cancer in any part of the body.

MR. FIELD: I thought he said that.

MR. HARDY: That is not true, if I may respectfully differ. I did not ask him a thing about the lungs. The only question brought out this morning was on the question of notice before 1952 with regard to any announcements by organizations respecting cancer in any part of the body. And when Mr. Field violently disagreed--I had the official transcript run, and it shows I did exactly as I said I did, if Your Honor cares to look at it.

THE COURT: All this questioning goes to the qualifications of the witness; it is not probative evidence in this case.

MR. HARDY: That was the only question.

THE COURT: Of course there is no issue in this case on bronchial cancer.

MR. HARDY: None at all.

MR. FIELD: Correct, Judge.

MR. HARDY: And I am objecting to trying

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cancer at all sites except the one where this man had one. Notice before 1952 appears in there twice. That was only on the notice question.

THE COURT: Then he asks the next question, Have you ever taught those doctors and those specialists that cigarette smoking is the cause of cancer at any site?

MR. HARDY: On teaching, that is correct. That is correct.

THE COURT: Well, I think the question--

MR. FIELD: What was the purpose of that question when you asked it?

MR. HARDY: It speaks for itself.

THE COURT: The whole question is somewhat collateral to any of the issues in the case here.

MR. FIELD: But it is cross-examination, Judge, and he did ask him about it.

THE COURT: It is cross-examination. You have the right to ask questions to test the qualifications of the witness. I think the jury has been instructed before that these types of questions are not evidence in the case and are not to be considered as evidence except as testing the qualifications of the witness. You may ask the question.

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Q (By Mr. Field) Do you have an answer to that question?

A Would you mind giving the question again. I became interested in this other discussion and missed it.

Q Certainly. In fairness, let me try to repeat it a little differently.

MR. HARDY: Before you do, let my continuing objection go to testimony concerning the lungs, stomach, other parts of the body, insofar as smoking cigarettes is concerned, that my objection continues to that as being no contention in this case and being irrelevant and immaterial and prejudicial.

THE COURT: It might be understood your objection can be a continuing objection to that line of questioning, and any testimony elicited from the witness in that connection goes only to the general qualifications of the witness and is not to be considered as probative evidence in this case.

Q (By Mr. Field) Doctor, we have gotten along here so far that I have lost the question myself. I will put it this way. Do you believe that when smoke slows down, tobacco-laden smoke, smoke that is laden with tobacco-tar condensates that have volatilized, as your old teacher used to put it, the product of the destructive distillation of the tobacco, the empyreumatic oil--do you believe in the areas where that tobacco tar slows down, eddies and whirls, that that is likely to produce cancer

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in the human body?

MR. HARDY: Just a moment. If the Court please, I have to object to this question for the reason that Mr. Field has translated emphyreumatic oils over to tobacco tar and smoke eddying he has transposed to eddying and whirling. There is no evidence as to either one of these. I object to it for that further reason.

THE COURT: Overruled.

A I don't believe it would.

Q (By Mr. Field) And you never have believed that?

A I never have believed it.

Q But at least you concede it is suspect?

A It is a suspect, yes.

Q Do you know any stronger suspect on your belief?

A In the—

MR. HARDY: At what area?

Q (By Mr. Field) Any area that the smoke comes in contact with.

MR. HARDY: I want to inquire, Your Honor. The question is not clear to me. Is he in this question including the cancer of the pyriform fossa, or is he still in the lungs, or where are we? I think the witness is entitled to know where he is talking about.

Q (By Mr. Field) You just finished saying that you would consider tobacco tars as suspect—

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A Suspect, yes, sir.

Q --of productive--producing human cancer, is that correct?

A Yes, sir.

Q At least you suspect it?

A Yes, sir.

Q Though you won't go so far as to admit that it is an etiological factor or that it is a cause or contributing cause?

A It is not.

Q At least it is suspect?

A It is suspect.

Q Do you know any suspects or do you hold any suspects any stronger than tobacco?

MR. HARDY: In what area?

Q (By Mr. Field) In any area.

MR. HARDY: I object to that then, Your Honor, for the reason the question is too broad to be intelligible or capable of answering. If he wants to ask about the lung, the larynx, the pharynx, any place--

MR. FIELD: I would like to cross-examine in my fashion, not the way Mr. Hardy wants me to examine.

THE COURT: He can ask the questions of the witness on conditions any way he sees fit--

Q (By Mr. Field) In the areas, Doctor, where you at least acknowledge that tobacco tars are suspect of causing

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human cancer, in those same areas, do you know any suspect that you regard in any greater degree than tobacco tar in those same areas?

MR. HARDY: Your Honor, in restating the question, the only area that the doctor has said tobacco tar was suspect was in the bronchial tree, and I therefore object to Mr. Field characterizing all of these areas. If he is going to talk about the ones the doctor has designated as suspects, he should so label it.

THE COURT: I think the doctor has testified to that effect and by reference--

MR. FIELD: Certainly he can't shape my cross-examination to his heart's desire.

MR. HARDY: He is talking about this case, as a matter of fact.

MR. FIELD: And I hope I can do it without this continued argument, that I can be relieved of this.

THE COURT: Let's get on with the case. The objection is overruled.

A In the bronchi I don't know of anything that I would consider more of a suspect than—

Q (By Mr. Field) Tobacco smoke?

A --tobacco smoke. In the pyriform sinuses, I would probably consider a combination of, let's say, alcohol, vitamin deficiency, and food deficiency. The reason I say that

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is that because at one of the hospitals where I was—  
where I was stationed and on the staff of which I was, I  
saw the greater part of my patients with pyriform sinus  
carcinoma, and they were alcoholics in large numbers.  
They suffered from food-deficiency diseases, and I  
assume—although we didn't test them out—that vitamin  
deficiency goes with food deficiency.

Q You didn't write a paper on that, did you?

A No, I didn't.

Q You have never published on the subject of pyriform  
sinus, have you?

A I didn't, no, sir.

Q How many articles did the counsel prove you have written?

MR. HARDY: You have objected to all those.

MR. FIELD: I didn't object to the number.

THE COURT: 188.

A 188.

MR. FIELD: I didn't see a copy of that. Do  
you happen to have another copy?

MR. HARDY: I would again offer it in evidence.

MR. FIELD: I object to it again, but I would  
like to see it.

MR. HARDY: I will offer it in evidence if he  
wants to let it in evidence. I will be happy to give  
him a copy and let him have it photographed and take it  
home with him.

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MR. FIELD: Your Honor, I object to this unconscionable demonstration for the jury as improper, as pettifogging. Of course, I have the right to look at anything that he has marked as an exhibit, and this making me object to it, to his offering it, because he offered it and the Court has already overruled it, is improper and I object to this demonstration.

\* And now I would like to avail myself of my rights and have counsel hand me a paper that has been marked as a Court exhibit in this case, which I have the right to see.

MR. HARDY: Which has been excluded, Your Honor.

MR. FIELD: It doesn't make any difference. It is a Court exhibit and I would like to see it. And I would like to have the Court order him to give me a copy of his witness's published articles.

THE COURT: The article has been excluded as evidence in the case.

MR. FIELD: Correct.

THE COURT: There is in the case a number of articles which the doctor has testified he has written.

MR. FIELD: And I would like to call on the Court to have him give me a document that he has had marked as an exhibit.

THE COURT: I don't see where it would serve

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any purpose, Mr. Field. It is not evidence in the case. It has been excluded.

MR. FIELD: But I would like to cross-examine him from it.

THE COURT: He wasn't allowed to testify about it except as to the number.

MR. FIELD: No, sir, that is correct. But I would like to call on Mr. -- have the Court call on Mr. Hardy to hand me the exhibit that he had marked.

THE COURT: No, it is --

MR. FIELD: I would like to request the Court to do that.

THE COURT: It has been excluded as evidence in the case. I think you should proceed with your cross-examination.

MR. FIELD: You mean you are overruling my request?

THE COURT: Yes.

MR. FIELD: All right.

- Q (By Mr. Field) Doctor, do you have a copy of this list of articles?
- A No, I do not, sir.
- Q It totaled how many?
- A A hundred eighty-eight, so I understand.
- Q And of all your published works, you have never published

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anything specifically on the pyriform fossa or cancer of the pyriform fossa, have you?

A Not as an article on the pyriform sinus.

Q No.

A I have incorporated that in some of my other reported cases of cancer that were treated surgically, but that is all.

Q How long ago was that? When is the last reference that you made in your work to cancer of the pyriform sinus?

A It might be '54, possibly '53; I am not certain about that. But that was purely a matter of surgical results, was all.

Q Yes. And the fact is, in these pyriform sinus cases that you testified to on direct examination that you said you had seen --

A Yes, sir --

Q -- you didn't keep any record of smoking histories, did you?

A Not detailed record, no, sir.

C I mean any record, period. You didn't make any inquiry about smoking habits in those cases, did you?

A Oh, I think we did in the majority of them, yes.

Q Why?

A We routinely do that because -- we routinely do that to check on all question of suspects etiologically considered from a --

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- Q I thought you said that you didn't suspect smoking?
- A Well, we do that routinely in all patients, no matter what the disease is. When the patient comes in, we take a history. We don't make the diagnosis first. We take the history first. Then we examine the patient and we may find he has carcinoma of a pyriform sinus, so we don't delete any of our history. That is a part of the record, you see, that is a part of the record.
- Q Have you ever made any study of the smoking habits of your patients that had pyriform sinus cancer?
- A No, not in detail.
- Q I didn't think so. Now, Doctor, you do concede that tobacco -- though you won't -- strike that. You will not concede, will you, that tobacco is a chief or principal or even any etiological factor in the production of cancer of the larynx, will you?
- A I do not concede it.
- Q But you do regard it as at least the chief suspect, don't you?
- A I would consider it as the chief suspect in cancer of the bronchus.
- Q I said the larynx.
- A But not in the larynx.
- Q And do you consider it a suspect at all?
- A I would consider it a suspect, but not a chief suspect.

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Q Is there any other etiological factor -- I mean any other factor that you suspect that is any stronger than tobacco in the larynx, tobacco smoke?

A Well, the fact that cancer of a vocal cord commonly occurs at the junction of the middle and anterior thirds, and in view of the fact, also, that vocal nodules commonly occur in that area, there have been those of us who believe that vocal abuse or excessive vocal use might be a definite consideration.

Q Do you consider that any stronger than tobacco?

A I would consider it stronger than tobacco.

Q Now, other than the vocal cords, you will concede that tobacco is your chief suspect in the larynx area, won't you?

A Not in the larynx area, because that is the common site of cancer in the larynx.

Q Well, but my goodness, not even 50 per cent of cancers of the larynx are cancer of the vocal cords, by your definition, are they?

A No, indeed, I disagree there. About 65 per cent of my cases appeared as cancers of the larynx.

Q That were vocal cords?

A Vocal cord.

Q All right, now, what about the other 45 per cent of cancers of the larynx on your cases, tobacco --

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A Thirty-five per cent.

Q I beg your pardon?

A Thirty-five per cent.

Q Tobacco was the chief suspect in those, wasn't it?

A I don't think so. I don't think it was the chief suspect. I don't know what suspects were there. There were so many of them that might be considered that I wouldn't be able to put my finger on any one of them as a chief suspect.

Q Well, principal, then.

A Well, principal, either way, either way.

Q All right, Doctor, you will concede, will you not, that your view and your refusal to regard smoking as an etiological factor is a majority -- a minority view among clinicians and physicians, isn't it?

MR. HARDY: Just a moment. Refusal to regard it as an etiological factor in what?

MR. FIELD: The production of cancer in the human body.

MR. HARDY: Your Honor, then, I will object to the question because that includes cancer of the skin --

MR. FIELD: Why, certainly --

MR. HARDY: -- and cancer of the colon and everything else, and there hasn't even been any testimony on the other.

MR. FIELD: He talked about cancer of the human

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body.

Q (By Mr. Field) You testified on direct examination that you didn't believe that smoking caused cancer in the human body?

MR. HARDY: That is not correct. He wasn't asked that question. I showed Your Honor the transcript a moment ago, and that is another misquotation.

THE COURT: He apparently wasn't asked that question. Why don't you ask him, Mr. Field, as pertaining to the larynx.

MR. FIELD: All right.

Q (By Mr. Field) The fact is, Doctor, you won't even concede that smoking produces cancer anywhere in the human body, will you?

A That is correct.

Q Is that right?

A That is correct.

Q Your view, you will also agree, won't you, is a minority view with respect to the views of clinicians and physicians, isn't it?

A I don't concede that. I won't concede that, not at all.

Q What?

A No, indeed, I won't concede that.

Q You feel most clinicians and physicians feel otherwise?

A I think so.

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Q You do?

A I think so. The reason, if I may say so --

Q Yes, sir --

A -- I don't consider tobacco as a very prominent -- I will put it this way. The reason I won't consider tobacco as the cause of cancer is because there is no experimental evidence in the human species to support that contention. It is admittedly true that the use of tars on mice have produced cancer.

Q Tobacco tars?

A Tobacco tars on mice have produced cancers, but I can conceive of no human being who would ingest into his system the amount of tar in a short space of time that is equivalent to what is employed on the back of a mouse. So that I don't think we can accept that as adequate evidence. I will accept that tar does produce cancer in mice, but the dose used is rather large.

Q Dr. Clerf, perhaps you misunderstood me. I wasn't asking your view. I was asking you if it isn't a fact that most, the majority, of clinicians and physicians today dealing with this subject, that they believe that smoking produces cancer in the human body in some places.

MR. HARDY: I object to that as being repetitious, Your Honor.

Q (By Mr. Field) Won't you agree with that?

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MR. HARDY: He completely answered that question.

MR. FIELD: No, he didn't.

MR. HARDY: He said he wouldn't concede that.

MR. FIELD: No, he talked about his own view.

MR. HARDY: I will object to it as being repetitious and, also, calling on him for the opinion of others, as hearsay.

THE COURT: It is calling on him for the opinion of others.

I think he did answer the question.

Q (By Mr. Field) By the way, the cancer in this area where Mr. Ross had it is a fast-growing cancer, isn't it?

A Fairly rapidly, yes.

Q And have you any estimate from your experience, you said you have had 200 cases of it, how fast-growing is it?

A It is difficult to say.

Q Yes, I know, but within limits.

A There have been some studies being carried out now that indicate that, probably, cancer grows more slowly than we thought it did, and --

Q I am talking about this area.

A Yes. I am referring to this area, or cancer anywhere, for that matter; in that they say it grows much more slowly than we believed it did. And if that is true, then

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this cancer has been present considerably longer than I thought it would have been present. Of course, I didn't see the original tumor and that sort of thing, so I am not in a position to indicate how long he might have had it.

Q Yes. Well, then, are you saying that you really don't know, Doctor?

A Well, yes, I don't know.

Q But, generally speaking, what is the experience on how fast-growing cancer of the pyriform --

A Well, it grows more rapidly than a laryngeal cancer does, we believe.

Q And that means what? More rapidly, you see, is a comparative term.

A Yes, it is relative.

Q Relativity doesn't --

A I have had laryngeal cancers that I knew had been in existence for as long as eleven years and I still was able to cure the patient. That, of course, is not the rule.

Q Well, you just finished saying pyriform fossa was faster-growing than laryngeal. I am asking you about pyriform fossa.

A So that is the longest I have had in the larynx. Now, in pyriform sinus cancers, they may last as long as four and

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five years.

Q That is the outer limits?

A Yes. Yes. So I would think, yes.

Q And the period could be much shorter than that?

A Oh, it could be shorter.

Q Yes.

A It depends upon what you consider as the termination of the period, if that is --

Q Yes. And, of course, also, it would depend upon the susceptibility of the individual?

A Many factors enter into it.

Q And the type of carcinogenic agent it had been exposed to?

A I know nothing about that. I don't know as that determines rapidity. I think the one thing that determines rapidity is inherent in the patient. I think that is as far as we can go there.

Q Wouldn't a strong carcinogen have a greater tendency to produce cancer quicker in a susceptible person?

A It might. We don't know much about the strength of carcinogens. By that I mean what is the dose of a carcinogen? We don't know.

Q Oh, you do with certain carcinogens, I am sure.

A I am not certain that we know exactly what is -- when it is carcinogenic. In other words, what is the dose? Will a minute dose produce a cancer or must you give it in a

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small dose over a long period of time or will the aggregate of a dozen small doses given all at one time produce it?

Q Oh, yes, of course, doctor, but you do recognize that there are strong carcinogens and weak carcinogens, don't you?

A Well, that is true. But when it comes to dosage, I don't think we have ever measured the doses in the human species. That is what I am referring to. In the human species, I don't think we have ever had any information on how strong a carcinogen is.

Q Well, you do know that --

A If there is any such information, I know nothing about it.

Q You do know that certain carcinogens are stronger than others for the human species, don't you?

A Well, that is true. But what is the dose? We don't know what a dose is, you see.

Q Oh, I am not talking about --

A As compared with doses of medicine.

Q I am not talking about doses, Doctor. So we again are clear on what we are talking about, when we say "carcinogen", we are talking about that agent which is capable of producing or causing a cancer under a given set of circumstances?

A Yes, sir.

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Q Is that right?

A Yes, sir.

Q Now --

A Under given conditions.

Q Yes. So to that extent you do know what the cause of a cancer could be, don't you, if it is caused by a carcinogen?

A That it is caused by a carcinogen.

Q Yes.

A Whatever that is.

Q And "carcinogen," by the way, that term means -- it comes from "carcinoma", doesn't it?

A Yes, sir.

Q And carcinoma is the medical term for cancer?

A The word comes from carcinoma, and the g-e-n, that has to do with the birth of or the begetting of cancer.

Q All right. Now, the people in your field have from time to time been plagued with problems of nomenclature and classification --

A Yes, sir --

Q -- of diseases in this particular area, haven't they?

A Yes, sir.

MR. HARDY: Excuse me. What particular area?

Q (By Mr. Field) Your specialty.

MR. HARDY: Oh.

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MR. FIELD: Please, please, can't I conduct

my --

MR. HARDY: Well, his specialty --

MR. FIELD: Can't I conduct my examination in  
my fashion?

THE COURT: Why don't you let him ask. The wit-  
ness can qualify his answers.

MR. FIELD: Certainly.

THE COURT: Or he can state if he doesn't under-  
stand.

MR. HARDY: Your Honor, I submit that this last  
question, when he asks about nomenclature of cancer "in  
his area", which he has described as including the  
esophagus, the pyriform fossa, the larynx and broncho-  
scopy, now, when he is talking about a mixture of nomen-  
clature or names, in fairness to counsel as well as the  
witness, I think he ought to say what area he is talking  
about.

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might do in the future. I will ask the jury be instructed to disregard his comments.

THE COURT: Of course the jury has been instructed to disregard all comments by counsel, also the questions except as to those questions where the answer is responsive to the question, the answer itself is evidence.

- Q. (By Mr. Field) Now, the hypopharynx, as Mr. Hardy calls it, is also known interchangeably as the laryngopharynx, isn't it?
- A. Yes, sir.
- Q. And the hypopharynx refers to what area?
- A. That is the area that extends from the oral pharynx above, that is, the pharynx on the level with the tonsils, we will say, from that point down to the opening in the esophagus, and it contains--
- Q. Is this the tonsils here (indicating)?
- A. Yes, I think so, and that hypopharynx contains the larynx and the beginning of the food passageway.
- Q. And that is also known as the laryngopharynx?
- A. That is known as the laryngopharynx.
- Q. And that is an acceptable term?
- A. That is being applied in books of anatomy or other text books.

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- Q. And cancers in that area are referred to as laryngopharyngeal cancers, aren't they?
- A. You can use that term if you wish to, in a broad general way, to say that, just as you would to say an intestinal cancer. That would take in the same designation in that it is limited to an anatomical area.
- Q. And until very recently the terms extrinsic cancer of the larynx and intrinsic cancer of the larynx were acceptably used, weren't they?
- A. They were used until about--that is, used very generally until about, oh, I would say 15 years ago.
- Q. Yes, because I recall reading one of your papers on 300 or 250 cases of cancer, "Carcinoma of the Larynx," published in about 1940, where you said at that time -- that was 14 years before your retirement--that the use of those terms was acceptable?
- A. It was at that time, yes, sir.
- Q. And incidentally that terminology, intrinsic cancer of the larynx and extrinsic cancer of the larynx, that was invented by whom? What was the man's name? I can't remember it. It began with a "G". You had it in your article. Began with a "G", didn't it?
- A. I don't know. It began shortly after the discovery of the laryngeal mirror, that I know. That was in 1870-something.

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- Q. Now, intrinsic cancer of the larynx refers, by that definition, to what?
- A. We commonly consider intrinsic cancer or refer to it as cancer within the cavity of the larynx.
- Q. And what does extrinsic cancer mean?
- A. Extrinsic cancer was used to take in all the others in the pharynx.
- Q. Including laryngo-pharyngeal?
- A. All within the pharynx.
- Q. And including cancer of the pyriform fossa?
- A. Pyriform fossa and hypopharynx and the rest of the lateral wall.
- Q. So that was known up until but a few years before you retired, cancer of the pyriform sinus was also known interchangeably as cancer of the extrinsic larynx, wasn't it?
- A. Yes, sir.
- Q. You are undoubtedly familiar with Mr. James Ewing?
- A. Yes, sir.
- Q. The pathologist?
- A. I knew Dr. Ewing.
- Q. You knew him personally?
- A. Yes, sir.
- Q. He was one of the most eminent men in the cancer field, wasn't he?

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T13-66w

- A. In his time he was.
- Q. And also a great pathologist, wasn't he?
- A. Yes, sir.
- Q. His text, "Neoplastic Diseases," went into four editions, I believe. You are familiar with the text of course?
- A. I am familiar with it.
- Q. And his fourth edition, I direct your attention, Doctor, to page 928, where he actually has a drawing--I don't mean a drawing, a photograph--
- A. Yes, a photograph.
- Q. Not a drawing even, a photograph of epidermoid carcinoma, and he classified it as an "epidermoid carcinoma involving tonsil and pyriform sinus of larynx," isn't that right?
- A. Yes, sir.
- Q. And he actually calls it and refers to it as the pyriform sinus of the larynx?
- A. Of the larynx.
- Q. And that of course means the extrinsic larynx, doesn't it?
- A. Yes, sir.
- Q. And in that sense extrinsic larynx includes the pyriform sinus?
- A. Yes, sir.
- Q. So that was an acceptable way of describing a pyriform

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sinus cancer as pyriform sinus of the larynx, correct?

A. Yes, sir.

Q. Now they asked you on direct examination if you hadn't read the medical records in this case, the hospital records, and asked you to interpret them, and I will hand you part of the pathological record in this case, Defendant's Exhibit 1, it is called, from Dr. Parkhill. Did they ever show you that as part of the records in this case?

A. I am not certain whether I saw this or not.

Q. This is the pathologist at Mayo's, Dr. Parkhill?

A. Yes, I know.

Q. Did they show you this?

A. I am not certain whether this was included in the record I saw or not. It probably was, because I remember seeing the diagnosis that she made.

Q. And when her diagnosis and your interpretation of that record--they asked you to interpret these records--that would be, would it not, where under "Diagnosis," on the form it says, "Diagnosis," and then the physician or pathologist is supposed to put the diagnosis in there?

A. Yes, sir.

Q. She puts "Larynx," then puts a colon, doesn't she, not a semi-colon?

A. No, a colon.

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- Q. Then she describes that cancer, doesn't she?
- A. Yes, sir.
- Q. Now, wouldn't your interpretation of that record be that that was meant to describe by that definition a cancer involving the extrinsic larynx?
- A. The extrinsic larynx, yes.
- Q. Yes, sir. So you would have to concede that, by any definition of the term, John Ross's cancer could also be called a cancer of the extrinsic larynx, is that correct?
- A. The old designations, yes, that is what it would be described as.
- Q. So we just don't fluff this case off on semantical differences.

MR. HARDY: Who was that comment for? I object to that one.

- Q. (By Mr. Field) Now, Doctor, with respect to Dr. Ewing, you said you knew him well--
- A. I knew him reasonably well.
- Q. He did a tremendous amount of research into the causation and etiology of cancer, did he not?
- A. Yes, sir.
- Q. Do you agree that one must make a distinction between the formal genesis of cancer and the exciting or final causes of producing a particular cancer? Do you

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8-69w

agree with that?

- A. In a general way, yes.
- Q. And you recollect, of course, that that was the import of Ewing's dictum on this subject, wasn't it?
- A. It was.
- Q. And do you agree with this statement from Ewing that runs through all four of his editions: "The cumulative effects of the habits of individual are seen in smoker's cancer of the lip, pharynx and larynx." Do you agree with that?
- A. Well, I can't completely accept that.
- Q. So you don't agree with Ewing's dictum?
- A. I agree with his dictum in part, but not in his final conclusions.
- Q. And this particular statement, "The cumulative effects of the habits of the individual are seen in smoker's cancer of the lip, pharynx and larynx"?
- MR. HARDY: Object to that as repetition.
- Q. (By Mr. Field) Do you agree with that?
- A. I can't agree with that.
- Q. Entirely?
- A. Entirely, no, I can't.
- Q. But he certainly covers the area of larynx and pharynx in his statement, doesn't he?
- A. He does that.

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T1° 70w

Q. And of course that would influence cancer of the pyriform fossa, wouldn't it?

A. It should, yes, sir.

Q. So at least Ewing believed that cancer of the pyriform fossa was the cumulative results of the habit of smoking?

MR. HARDY: If the Court please, I object; he has now got poor Dr. Ewing, dead for years, testifying and asking Dr. Clerf to tell us what he believes.

MR. FIELD: I will withdraw it.

THE COURT: Objection sustained--but the question is withdrawn.

Q. (By Mr. Field) I will withdraw it. The definition of cancer of the larynx in the Jackson text, "Ear, Nose and Throat," are within that same definition of extrinsic cancer of the larynx?

MR. HARDY: I will object to that and ask that Counsel refer to the work in a proper method of cross-examination, and I have the page here for him if he wants it.

MR. FIELD: No, I am going to do it in my fashion, not the page that you want.

THE COURT: Sustained.

Q. (By Mr. Field) When Dr. Jackson talked about cancer of the larynx he was including intrinsic and extrinsic,

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8-71w

wasn't he?

MR. HARDY: I will object to that. Let him read it from that book if he can.

- Q. (By Mr. Field) "Etiological Factors of Cancer of Larynx," and so forth. Does this refer to extrinsic as well as intrinsic?

MR. HARDY: Just a moment. Your Honor, I object. Read it from the book.

THE COURT: Yes, read it to him.

- Q. (By Mr. Field) "The Etiological Factors of Cancer of the Larynx. Irritation may be of many kinds but alcohol, tobacco and vocal abuse are among the more common forms." Now, does that refer to both extrinsic and intrinsic cancer of the larynx?

MR. HARDY: I object to that for the reason this is not Dr. Jackson testifying, and he didn't read from the book the thing he said he was going to read from the book, and to ask Dr. Clerf to give a conclusion as to what Dr. Jackson meant, when he didn't say it, calls for an improper conclusion, hearsay, and is improper cross-examination from a treatise.

THE COURT: Yes, I think it is.

- Q. (By Mr. Field) Doctor, Do you concede that heavy smoking produces pre-cancerous changes in the larynx, both intrinsic and extrinsic?

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T1<sup>2</sup>-72W

- A. I have never been sympathetic with the term pre-cancerous, but I think that possibly heavy smoking might be a suspect, if you wish to use the term pre-cancerous.
- Q. Well, you have some understanding of what the term pre-cancerous means, don't you?
- A. Yes, sir.
- Q. Would you tell the jury what that means?
- A. Well, pre-cancerous is used by some clinicians and pathologists to denote or describe a lesion that they believe might later turn into cancer, and this is sort of a pre-cancer thing, that ultimately it may become cancer.
- Q. And within that definition of pre-cancerous, isn't it true that keratoses and leukoplakia are considered as pre-cancerous conditions?
- A. They used to be more strongly possibly than they are now. There was a time when we felt that keratosis or leukoplakia were in a sense precursors of cancer. But I think that now there are many--and I for one don't believe that the chances are quite as great and therefore I think many of us have changed our views on it.
- Q. Now about your colleagues and associates, Putney and O'Keefe?
- A. Well, I think they have changed their views, too, because I think I colored their opinions a little bit.

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- Q. When did they change their views?
- A. Well, I would say within the last decade or so.
- Q. Since your retirement?
- A. Well, probably a little before.
- Q. Do you recall the paper they published on this subject in June of 1953, a year before your retirement, entitled, the "Clinical Significance of Keratosis of the Larynx as a Premalignant lesion"?
- A. Yes, Yes, I remember that.
- Q. And do you recall that they held the opinion then that keratosis and leukoplakia were premalignant lesions of the larynx?
- A. Yes, at the time they published that.
- Q. And that one of the causes of pre-cancerous lesions was tobacco smoking?
- A. They thought so at that time, yes.
- Q. And that came as a result of the continued irritation of the smoke?
- A. That was their opinion.
- Q. Yes. Now, you never have gone along with that?
- A. Not entirely, no. No, I haven't.
- Q. And the best you will say is that it is suspect?
- A. Suspect.
- Q. And I believe, Dr. Clerf, the reason you won't go any stronger than suspect, but you tell me if I am wrong,

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18-74W

is because there hasn't been any human experiments comparable to the animal experiments?

A. I would say that we have been unable to do what one should do in medicine. If you are going to establish a cause you want to be able to produce it experimentally. Of course in the human we can't. But it ought to be repetitious sufficiently often under given conditions so that you can accept that as a fact, and we have not had an opportunity to do that in cancer.

Q. What ought to be repetitious?

A. Reproducing cancer under given conditions.

Q. In the human being?

A. Well, of course we can't do that, so we have been unable to carry out the experimental studies that we can in the laboratory animal.

Q. Of course not, you can't--

A. I know that.

Q. Your very code as a physician would prevent you from painting--

A. Absolutely. We can't do it.

Q. --the larynxes of human beings with tobacco tars?

A. Yes. We cannot do it.

Q. And your very code as a physician would prevent you from painting the pyriform sinuses of human beings with tobacco tars?

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T18-75w

- A. I agree with you, absolutely.
- Q. Because you just simply cannot experiment and be true to your physician's oath, you cannot experiment on human beings to try and produce this dread disease, is that right?
- A. That is right.

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- Q But then I take it, Doctor, that you never get any stronger than a suspect on this.
- A Ultimately we may. Ultimately. But --
- Q But it is going to take a --
- A But until then I am not going to concede that it is a cause. Until then I shall not.
- Q Yes, because you require a higher degree of proof than Chevalier Jackson?

MR. HARDY: Just a moment. I object to that question --

- A Well, I am not certain --

MR. HARDY: Just a moment, Doctor.

I object to that question asking him to compare his degree of proof with that of Dr. Jackson, who is not a witness here.

THE COURT: Objection sustained.

- Q (By Mr. Field) Now much proof would it take to prove to you, Doctor, that tobacco tars can cause cancer on human tissue?
- A Well, I am not prepared to say at this time just how much would be required.
- Q Well, obviously it takes some human experimentation, wouldn't it?
- A I wouldn't demand that, no, not at all.
- Q What other proof --

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T19s73

A Not at all --

Q -- could you have that would satisfy you?

A Well, just for the moment I am not certain what I would require. So far there has been a very strong statistical association between cancer in certain localities and smoking.

Q Yes, sir.

A But it hasn't followed through in all the fields in which tobacco is a suspect. Now, in order to be consistent, it should follow through, and it hasn't done it.

Q Well, but, are you saying then that you would accept it if it followed through statistically?

A I think I ultimately would, yes.

Q How far up the statistical quantum would it take? Virtually have to be a hundred per cent?

A No, no, not at all.

Q How close?

A I am not prepared to say just how far up the ladder it would have to go, but -- I am not prepared to say.

Q Let's talk about clinical statistics, not epidemiological, but clinical statistics. Would a spread of 1,000, 2,000 clinical cases with one or two or three non-smokers and the rest heavy smokers, in cancer in a particular area, would that be sufficient for you?

MR. HARDY: Just a moment. If the Court please,

T19s74

I will object to that for the reason he has already testified that he doesn't know what proof would be necessary. Now he is asking him to speculate and hypothesize upon what might convince him on some nondescript site at some future date and it calls for speculation, conjecture and is repetitious.

MR. FIELD: No, it is cross-examination, Judge. I just want to see if I can find out. He apparently says he doesn't truly know, but I want to see how much he knows, just how much proof he would require.

MR. HARDY: He has answered that question, Your Honor, the best he can.

THE COURT: Well, he has answered he doesn't know and he doesn't want to state. I don't know that --

MR. FIELD: He can answer that question if he doesn't want to state. All he needs to say is that he doesn't want to state.

THE COURT: I don't know that that is proper cross-examination, to cite that type of an experiment, if it was, or test or clinical test or figures from certain tests.

MR. FIELD: All right, I will withdraw it, Judge, if you have some question about it.

Q (By Mr. Field) What type of clinical evidence would you require before you would accept the proof?

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MR. HARDY: I object to that as repetitious, Your Honor. He has been over that completely with the witness.

MR. FIELD: Oh, no, he hasn't, not clinical.

THE COURT: You may answer.

A I must say in answer to this whole problem that one doesn't, seated as I am here in a witness chair, determine what sort of evidence one would require to arrive at certain positive conclusions --

Q (By Mr. Field) All right, Doctor--

A -- concerning a disease -- allow me to answer, please -- concerning a disease as serious as cancer is. I feel that that sort of thing requires a great deal of thought, a great deal of consideration. One doesn't jump at these conclusions as you jump over the back fence. It requires a great deal of thought, and I am not prepared at this moment to answer that question for you or anybody else.

Q I will accept that, doctor.

A Thank you.

Q Have you reviewed the literature on the subject of statistical evidence, that is that -- you have never made any statistical epidemiological studies yourself, have you?

A No, sir. No, sir.

Q But that is part of the evidence that you would want to see and examine. Have you ever made any review of that?

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A I have reviewed some of it, yes, not in detail.

Q No. You are, of course, familiar, are you not, Doctor, with --

THE COURT: Mr. Field, I think at this time we might as well take our mid-afternoon recess.

MR. FIELD: All right, Your Honor.

THE COURT: Members of the jury, we will be in recess for ten minutes. Again the Court cautions you not to discuss the case.

(Recess)

Q (By Mr. Field) Doctor, speaking of the literature, you have tried to keep up on the literature in this field of smoking and cancer?

A I have, I have made an attempt to, yes, sir.

Q Because you have given opinions with respect to the evidence as you believe it to exist and to be available. Then I assume you are probably familiar with Dean Davies' paper, the Research Director of the American Cancer Society, "A Review of the Evidence on the Relationship Between Smoking and Lung Cancer"?

A Where did that appear, may I ask?

Q I beg your pardon?

A Where did that appear?

Q In the Journal of Chronic Diseases --

A Oh, yes --

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Q -- in 1960.

A Yes, yes.

Q I am sure you are familiar with that.

A Yes, yes.

MR. HARDY: Your Honor, I would like to object to literature with regard to lung cancer. If we are going into other fields and review the literature with regard to all these different cancers at different sites, the trial will never be over. It is irrelevant and immaterial, has no bearing on the issues of this case whatsoever.

MR. FIELD: It is cross-examination on his knowledge, Judge, and his review of the literature, and he says he is familiar with that article and the authority.

And, furthermore, it bears on not only his qualifications, but it bears on the subject of the evidence.

MR. HARDY: May I ask one question for the purpose of making an objection further?

Dr. Clerf, in your opinion, is there any relationship between cancer of the lungs and cancer of the pyriform fossa as to it being the same disease or a different disease or as to causation, that you know of?

MR. FIELD: That wouldn't make any difference,

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Judge, as far as my cross-examination goes, because there has been other testimony --

MR. HARDY: He hasn't answered the question.

MR. FIELD: Wait a minute,

THE COURT: Let him answer the question.

MR. FIELD: All right.

THE WITNESS: Well, you asked whether they were the same disease --

MR. HARDY: Or different diseases --

THE WITNESS: -- or different diseases so far as causation is concerned. I would say they were quite different from my viewpoint, so far as cause is concerned.

MR. HARDY: I object for the reason that this line of questioning is just as irrelevant as if he were examining him on the construction of a Buick motor.

MR. FIELD: Well, but, no, Judge, to the contrary. I have produced testimony in this case that the two are related, and I am not confined in my cross-examination of the doctor to just how narrowly he seems to confine it.

THE COURT: You can ask the question on cross-examination --

MR. FIELD: Why, certainly --

THE COURT: -- but it relates only to testing the qualification of the witness. It is not probative evidence in the case.

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MR. FIELD: Yes, sir.

- Q (By Mr. Field) All right. Now, Doctor, I want to read to you from this paper by Dean Davies, the Director of the Research of the American Cancer Society, published in the Journal of Chronic Diseases in June of 1960, from his Conclusions:

"The scientist is traditionally reticent about interpreting facts, but most physicians, public health officers, and the public are finding it quite reasonable to accept the belief that smoking is the major environmental causative factor in human epidermoid lung cancer. The evidence in favor of such a relationship is extraordinarily abundant and consistent. The several alternative suggestions are largely speculative and consistency among their proponents is lacking."

Now, I simply want to ask you if you agree with that.

A No, I do not.

Q All right. Doctor, in your review of the literature are you familiar with Wynder, Bross and Day's work entitled "A Study of Environmental Factors in Cancer of the Larynx" published in Cancer in 1956?

A '56, yes.

Q You are familiar with that?

A I am familiar with that.

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Q And you recall that in that paper that Drs. Wynder, Bross and Day included cancer, both intrinsic and extrinsic cancer of the larynx, is that correct?

A Yes, sir.

Q And by your acceptance and acknowledgment, this pyriform fossa cancer is also a cancer of the extrinsic larynx, isn't it?

A It is a part of the extrinsic larynx.

Q Yes, sir. And could be so classified as a cancer of the extrinsic larynx?

A Yes, sir.

Q Is that correct?

A Yes, sir.

Q All right.

A From the basis of the old literature; I wouldn't do it now, but on the basis of the old literature, yes.

Q Because we don't want to just slough this off as a semantical difference?

A Yes.

Q Now, I read to you from this paper which you acknowledge has been written in this precise field of extrinsic as well as intrinsic cancer of the larynx, which you say, as far as extrinsic cancer goes, would include cancer of the pyriform fossa, I read to you this --

MR. FIELD: On Page 104, Mr. Hardy, in case you

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desire it.

MR. HARDY: Thank you.

(By Mr. Field) -- under "Discussion". I am not going to go into all the analysis of the data, but in his conclusion and discussions:

"Tobacco. This survey has demonstrated a clear association between tobacco smoking and cancer of the larynx, both of the intrinsic and extrinsic types. There were significantly more non-smokers and light smokers among the control group and, contrariwise, more heavy smokers among the cancer group. The total tobacco consumption for the American larynx- and lung-cancer patients was very similar.

"On the basis of the American data, cigar and pipe smoking seemed to be somewhat more closely related to larynx cancer, particularly to the extrinsic type of larynx cancer, than to lung cancer. There is also a suggestive relationship of tobacco chewing to the latter type. The most striking fact of the study is that among 209 larynx cancer patients we found but one non-smoker. This observation is in line with previous lung cancer surveys, indicating that these types of cancers but rarely develop among males who do not smoke. The data also clearly show that the risk of larynx cancer goes up as the amount of tobacco smoked increases."

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Now I want to ask you if you agree with that statement in the discussion of that paper as reprinted in Cancer, Volume 9, in February of 1956?

MR. HARDY: Now, Your Honor --

(By Mr. Field) Do you agree with that?

MR. HARDY: I will object to that for the reason that he skipped a portion of the quote right out of the middle.

MR. FIELD: It wouldn't make any difference what portion I skipped.

MR. HARDY: He skipped a portion right out of the middle.

MR. FIELD: He can bring that out on redirect if he wants to, Judge. This burden is intolerable, his interrupting my examination of the witness.

THE COURT: Well, I think if you did skip a portion of the quote, you should indicate there that some is being skipped. Otherwise, if the doctor has the --

MR. FIELD: He knows what I skipped.

THE COURT: I know he knows, but the doctor doesn't.

MR. HARDY: That is right. This is typical of his tactics.

MR. FIELD: Oh, typical of my tactics, my foot.

THE COURT: Let's get on with the case,

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T19s33

gentlemen.

MR. FIELD: You are making me get to the end of my rope, Mr. Hardy.

Q (By Mr. Field) I will put the whole thing in. He would like me to put it in because it will blur, in part, the conclusion, but I will put it in.

"On the basis of the American data, cigar and pipe smoking seems to be somewhat more closely related to larynx cancer, particularly to the extrinsic type of larynx cancer, than the lung cancer."

Now, then, I left this out because it wasn't in the case, but I will put it in:

"There is also a suggestive relationship of tobacco chewing to the latter type. It would be of interest to carry out tobacco surveys among larynx-cancer patients living in communities where tobacco chewing is more prevalent than in our patient material. Such studies, as also suggested for the Indian data, might show tobacco chewing to be of significance in the development of extrinsic-larynx cancer."

That is the part I left out. And then the conclusions:

"The most striking fact of the study is that among 209 larynx-cancer patients we found but one nonsmoker. This observation is in line with previous lung-cancer

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T19s34

surveys, indicating that these types of cancers but rarely develop among males who do not smoke. The data also clearly show that the risk of larynx cancer goes up as the amount of tobacco smoked increases." 1690

Now, do you agree with that paper and that conclusion?

- A No, not entirely, in that I still believe that tobacco is as suspect in intrinsic cancer of the larynx, not in extrinsic, but that doesn't mean that it is the etiological factor. There is still something missing in this whole thing that we haven't discovered.

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- Q To your opinion?
- A That is my opinion, obviously.
- Q And so you don't agree with the opinion of those--
- A No, I don't agree with them; no, sir.
- Q Any more than you agree with Dr. Davies and his review of the evidence on the relationship?
- A Quite right.
- Q You don't agree with him?
- A I don't agree with him.
- Q Now, Doctor, do you agree with Dr. Ewing's dictum on the subject?
- A In part.
- Q What part do you agree with?
- A Well, I can't agree with his final conclusions. I don't recall them in detail now.
- Q But what part do you agree with? You said you agreed in part.
- A Well, I— In his first statement I would probably agree with him, but I must admit that Dr. Ewing's observations were made long ago, and we have covered a lot of ground since then and we have forgotten some of the things that he has stressed and we are now picking up new things as possible suspects. For example, the viral theory. Ewing said nothing about it; it wasn't known at that time. But now the question of virus figures very prominently in

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the investigative work in cancer.

Q Yes. But the fact of the matter is, is it not, Doctor, that when Ewing expressed the dictum that you speak of--

A Yes.

Q --that these tobacco habits cause smokers cancer of the larynx, as he called it, since that time and since his fourth edition there has accumulated some more positive evidence with respect to the carcinogenicity of tobacco smoke, hasn't there? For example, the experiments on mice's backs, rabbits' ears, and dogs, producing cancer from tobacco tars has come after that and of course would tend to confirm that belief, wouldn't it?

MR. HARDY: Just a moment. If the Court please, I object to that question. There has been testimony about mice's backs, but I don't know anything about rabbits' ears and dogs that there has been.

MR. FIELD: Strike rabbits' ears and dogs.  
Just answer the question.

MR. HARDY: And for the further reason that he has already gone over with him his views with regard to Dr. Ewing, and it is repetitious.

THE COURT: I think it is repetition. He may answer the question.

Q (By Mr. Field) You got the question, didn't you, Doctor?  
A Well, it has to do with cancer of mice.

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Q No, no. The question is that since Ewing announced his belief, there is other evidence that has accumulated?

A Yes. And there is cancer in mice. I still say that any self-respecting mouse ought to react in some fashion to a dose of tar applied to his bare back, and--but that doesn't prove anything except that--as I have often said, that mice shouldn't smoke. But that I don't mean here, because a strong solution of tar has no place on a mouse's back and it probably could produce cancer. We have long since agreed that irritation is a form of --is a--a very definite suspect in the causation of cancer. And tar to a mouse's back is certainly a form of irritation.

Q But alcohol isn't?

A Has never been applied to a mouse's back to my knowledge.

Q I thought you said that alcohol was not a carcinogen.

A I stated it hasn't been applied to a mouse's back so far as I know.

Q A mouse or any other animal, I thought you said.

A I agree. I said as far as I knew it never has been applied as a carcinogen.

Q So tobacco tar has been proved to be a carcinogen in animals, but alcohol never has been proved?

A I don't know of any experiments to support that.

Q Let's pass along. There is evidence in this case,

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certain ads of the defendant, stating that eminent doctors reported in different medical journals that, on comparison with four other leading brands, the other leading brands were 235 per cent more irritant than the strikingly contrasted Philip Morris. What is more, the irritation was found to last more than five times as long. And eminent doctors performed these tests and that this superiority of Philip Morris is recognized by eminent medical authorities.

My question is, Are you such an authority that performed any such test?

A No, sir, I have nothing to do with that.

Q Do you know of any evidence that makes Philip Morris-- makes it superior, according to the other ads?

A I know of no such.

Q You are not such eminent authority?

A I can't qualify.

Q As they mentioned. Do you know who those eminent medical authorities are?

A No, sir.

Q Are they among any of the defense doctors you have conferred with?

A Not to my knowledge.

Q And finally, Doctor, let's see, when did you first come into consultation on this case? Oh, by the way, Doctor,

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before I ask you about that, I do want to go down one little thing and we are just about through.

Doctor, would the fact-- You did learn from the hospital records that they have showed you some of the facts surrounding John Ross's cancer, didn't you?

A Yes, sir.

Q And that he was 52 years old when the cancer was removed?

A I think so, yes.

**Q** Taken out in February of 1952 and--

A '52--

Q --and he was born in November of 1899, so it is right at the turn of the century and easily equated. So he was around 52?

A Yes, sir.

Q Would the fact that Mr. Ross got married the first time either in 1919 or 1920 make any difference with respect to the production of his cancer?

A Not so far as I know.

Q So a mistake on that date, that mistake would be immaterial?

MR. HARDY: If the Court please, I object to this line of questioning unless Mr. Field embodies for the doctor in one question all of the many false statements that were established in that regard and the facts relating to his entire background, so the doctor can have a complete picture upon which to say whether or not it

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is important. If you do that, I have no objection.

MR. FIELD: I am not going to tailor my question to suit his heart's desire.

MR. HARDY: He is picking out one point at a time, Your Honor, when it has been contended it is the entire background that is important.

MR. FIELD: Judge, I would like to conduct this in my own fashion within the limits of--

THE COURT: You may proceed on cross-examination. Of course the question can be taken up on redirect.

MR. FIELD: Certainly.

Q (By Mr. Field) Now, second, Doctor, would the fact the man's first marriage, asking you to assume it was in 1921--would the fact whether that was annulled or by divorce that he got make any difference about his cancer, getting the cancer forty years later?

A Forty years later?

Q Yes.

A I don't believe so.

Q No, of course not. Now, third, would the fact that the young John Ross as a youth, when he was eighteen or nineteen, thirty-eight years before, had gonorrhea have anything to do with his getting cancer forty years later?

A No, sir.

Q Fourth, would the fact that he married a second time and

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was only married two weeks and got married in 1925 instead of 1927 make any difference on the production of his cancer years later?

A I don't see how it could.

Q I don't either, but you are the doctor. Six, would the fact that he had, unfortunately—as has been established here—that he had a child born out of wedlock in the early twenties and then married the child's mother a year or so after that, would that in any way bear on the cancer he developed thirty years, thirty-five years later?

A That— These strange things that you are referring to might bring up a question of some constitutional background. I am not certain just what this all implies.

Q I know you are not.

A I don't know what it implies.

Q But I think we know what it implied—

MR. HARDY: Let him finish the answer.

Q (By Mr. Field) Can you think of any bearing that that would have on constitutional background?

A Not as an isolated event.

Q No, sir. Now, would the fact that his mother died in— his father died in 1958 instead of 1964, would that make any difference?

A I don't see how she could.

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Q That his father died--strike that. That his father died when he was 58, rather than 64, would that make any difference?

A Well, I am not certain just what you have there. There is an interval of six years that they can't account for as to who died. What was the proposition?

Q I will tell you what I mean.

A What was the proposition?

A I will tell you the proposition. When the hypothetical question was asked, the data given one of these doctors was that the father died at the age of 64. Now, the fact is he died at the age of 58.

A Oh, I see.

Q Would that make one whit of difference?

A Not as an isolated happening, no.

Q There couldn't be anything more isolated than that single event, could there?

A No.

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Q. O.K. That is ten. Now, would the fact that his mother died at the age of 77 instead of 74, as recited in this question to the doctor, would that make one whit of difference about the cancer in this case?

A. Not as an isolated happening.

Q. That is pretty isolated, the death between 77 and 74, isn't it?

A. I guess it is isolated.

Q. What?

A. Yes, it is isolated.

Q. Now, the 13th, would the fact that his brother died of uremic poisoning in 1938, instead of dying of uremic poisoning in 1955, would that make any difference with respect to the cancer that John Ross had in 1952?

A. It wouldn't make any difference with respect to the cancer, but it suggests to me that there must be some terrific confusion somewhere around here, and I am just wondering whether I am hearing correctly.

Q. That is exactly right. But you wouldn't want that confusion, terrific as it is, if it had utterly no bearing on the man's case, you wouldn't want that to prejudice it, would you?

A. No.

Q. And you wouldn't use it that way, would you, Doctor?

A. Not as isolated examples, no.

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Q. Of course not. Now, would the fact that he got married three times instead of two times in the course of his lifetime, would that make any difference on whether or not he developed cancer in his throat?

A. I still believe that with this strange confusion, there must be some constitutional factors underlying the whole thing, and whether they have any bearing on heredity or not I don't know. I think I mentioned this morning among the suspects that heredity--and under that I said one has to consider constitutional factors, so I don't know what influence it would have.

Q. But, Doctor, in all fairness can you think of any influence that it would have?

A. Well, just offhand I don't see any yet.

Q. Any of these 15 things I have enumerated, taken either singly or in context, combination all together, in fairness to the proof in this case, and I assume--I know that is what you are doing, in fairness, taken singly or all together, can you think of anything that would have any real bearing on the production of his cancer in 1952?

A. Not any direct bearing, no.

Q. No, sir. Either taken as isolated instances or all together, is that your testimony?

A. Right.

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T21-78w

Q. And if I were to ask you to assume that some of those were his lawyer's mistakes you wouldn't put that on him either, would you?

A. I won't answer.

Q. Well, except we lawyers don't get to bury our mistakes. Now, Doctor, finally, when were you first called in consultation on this case?

A. I was communicated with sometime in the fall of 18-- 1959.

Q. Dates are confusing sometimes, aren't they? 1959?

A. Yes, sir.

Q. And who was it that first took you into consultation? Any of these counsel?

A. Let's see, I believe Mr. Holtzman.

Q. This gentleman in the second chair?

A. Yes, sir. And I think Mr. Hardy.

Q. Was he in the case then?

A. I think he was.

MR. HARDY: I was there.

A. I thought he was there.

MR. HARDY: I was.

A. And I am not certain whether there was a third member or not.

MR. HARDY: Judge Oliver.

MR. FIELD: No, he wasn't a judge then.

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MR. HARDY: Well, Mr. Oliver.

MR. FIELD: I know why you do that. It is just like bootleg whiskey, but we are on to it.

A. What?

Q. (By Mr. Field) There were three of the attorneys first came to see you?

A. Yes, three.

Q. In St. Petersburg?

A. Yes, sir.

Q. Then when was the next consultation with them?

A. Frankly, I am not quite certain. Let's see, that was December. I think it was sometime in the summer of-- I am not certain, frankly. I really don't know.

Q. Well, the first consultation was what date, with the three attorneys?

A. I don't have the date.

Q. I mean the month?

A. It was sometime in the fall of 1959.

Q. The fall of 1959. And was that several days or one day?

A. Oh, no, sir, it was only part of one day.

Q. Then the next consultation, just generally, was when?

A. I am sorry, I don't know whether I can supply you with that data because I don't have--

Q. Can you name the year?

A. It was the following year, 1960.

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- Q. Can you name the season?
- A. It was probably the summer, but I am not certain.
- Q. The summer of 1960. And how long did that consultation last?
- A. Well, that was again part of a day and I don't remember who was there. I think Mr. Holtzman was there. I really don't know.
- Q. Were there any other attorneys there?
- A. There was somebody else there but I don't recall who it was.
- Q. Some other attorney?
- A. Yes, sir.
- Q. That was in the summer of '60?
- A. I think it was in the summer of '60.
- Q. And what were you--I suppose both of those sessions they were wanting to get your views on this subject, whether or not you believed that smoking caused cancer, among other things?
- A. Well, in part that and in part a discussion of the larynx.
- Q. Of what?
- A. Of the larynx and the pharynx, the area in the--the upper area in the food passages.
- Q. Then when was the next conference that you had with the attorneys?
- A. The next conference was--let's see--I am sorry I

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haven't those dates at hand. The next conference was about two months ago, I believe, about two months ago, probably was in March or April.

Q. In the spring of 1962?

A. Yes, sir.

Q. Was that with the attorneys?

A. That was with Mr. Hardy and Mr. Holtzman.

Q. And where was that?

A. That was in St. Petersburg.

Q. Also in St. Petersburg?

A. Yes, sir.

Q. And had you had any conferences with them or any of their other defense doctors before that time?

A. No, sir, I hadn't met up with any of them.

Q. So you had three conferences in St. Petersburg, in the fall of '59, the summer of '60, and then Mr. Hardy came back to see you just last spring, with Mr. Holtzman?

A. Yes, sir.

Q. And you had another conference?

A. That was this past spring, yes, sir.

Q. That was your third conference with the defense attorneys?

A. Yes, sir.

Q. Then when was your next conference?

A. That was all. They never came back again.

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-82w

- Q. Well, until you came here?
- A. Until I came here.
- Q. But you have been here since last Wednesday?
- A. Last Tuesday, Tuesday evening.
- Q. So you have been here since last Tuesday, this is Monday, you have been here almost a week then?
- A. Yes, sir.
- Q. Haven't you been in conference--
- A. Oh, yes, since I arrived here, I was in conference with them Wednesday afternoon and that is about the only conference we have had. I have been cooling my heels.
- Q. On their time, I take it?
- A. I have been here.
- Q. They are paying you for this?
- A. Well, I assume they are.
- Q. There isn't any assumption about it, you know they are?
- A. Well, we will say that I do then. At least I am hoping they will. I will put it that way.
- Q. Well, you don't have to equivocate on that, do you? That is the fact?
- A. No. I have no arrangement with them, I will put it that way.
- Q. Haven't they paid you for the conference in the fall of '59?
- A. No, sir.

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T21-83w

- Q. And haven't they paid you for the conference in the summer of '60?
- A. No, sir.
- Q. And the conference in the spring of '62?
- A. No, sir.
- Q. And you have been here a week?
- A. Been here a week.
- Q. And you do intend to charge them?
- A. Oh, indeed I do.
- Q. And what do you intend to charge them, Doctor?
- A. That I don't know.
- Q. Just give the jury a reasonable approximation.
- A. I don't know just what I shall charge them, because I am very frank to say this is the first time that I have ever been on this type of a case. My cases are commonly simple civil problems.
- Q. Well, this is a civil problem.
- A. I mean by that, local problem, oftentimes between someone who is appointed by the Court to take evidence, and then he makes a few inquiries and arrives at a decision, compensation very largely. This is the first trial I have ever sat in on, and I haven't any idea what I am going to charge them. I am very frank to say that.
- Q. At least it is going to be more than a hundred dollars a day, isn't it?

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- A. I should think it probably would be.
- Q. So your fee will be several thousand dollars at least, won't it?

MR. HARDY: Just a moment, if the Court please.

- A. I don't know about that.

MR. HARDY: He has asked him about his fee and he has testified on it. Now for counsel to start trying--

THE COURT: Yes, I think that is out of line.

- Q. (By Mr. Field) Well, all right. It is going to be at least a hundred dollars a day, isn't it?

- A. I have said--

MR. HARDY: Object to that as repetition.

THE COURT: He has testified as to that.

MR. FIELD: I think the jury is entitled to know.

THE COURT: They are entitled to know, if he knows.

MR. HARDY: If he knows, and he has already testified on it. This is just some more of the same, Your Honor, that he says I am so unfair in objecting to.

- Q. (By Mr. Field) And you have been here for seven days?

- A. It will be seven days. I have been here six days.

- Q. I thought you said you came here last Tuesday?

- A. Yes, sir.

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P21-85w

- Q. And this is Monday?
- A. Tuesday evening about 9 o'clock I arrived.
- Q. And you took all day to get here from St. Petersburg, didn't you?
- A. No, sir.
- Q. Or most of the day?
- A. Yes, half the day.
- Q. So that is at least seven days you will charge them for?
- A. Yes, sir.
- Q. And you are going to charge over a hundred dollars a day?
- A. Probably so.
- Q. And you have had three consultations with them before that, in '59, '60 and '62?
- A. Yes, sir.
- Q. So that is at least \$300, isn't it?
- A. Yes.
- Q. So you will be charging the defense well over a thousand dollars for the testimony and the consultation that you had, won't you, is that right?
- A. I should think so, yes.

MR. FIELD: Thank you, Dr. Clerk.

REDIRECT EXAMINATION

BY MR. HARDY:

- Q. Doctor, Mr. Field has a little phony expression that he

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always likes to put in about the time of cross-examination, and in four hours and eight minutes of cross-examination, has Mr. Field changed your opinion in any way, shape or form with regard to the fact that the pyriform fosse are closed during inhalation and that smoke does not invade the pyriform fosse?

MR. FIELD: I will accept that question with one proviso, and that is a good third of my cross-examination was taken up by your objections.

A. He has not changed my opinion.

Q. (By Mr. Hardy) He has not changed your opinion. Now, Doctor, Mr. Field read to you and asked you if you agreed with Dr. Wynder in an article which he read with reference to extrinsic larynx cancer, as it used to be considered. I want to ask you first if extrinsic cancer, in that sense, was not used to refer to all cancers that were not in the larynx, that were out in the pharynx?

MR. FIELD: Object to that. Now wait a minute Judge, I am going to start calling him on this. I object to that as leading and suggestive. I didn't do it up till now, but I am going to object from now on to leading and suggestive questions.

MR. HARDY: Your Honor, I don't object to his making his objections, but pleading his virtue every time

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T21-87w

he does, I don't think he should be permitted to do that.

THE COURT: Objection sustained.

Q. (By Mr. Hardy) Doctor, I will ask you within the old terminology, was I correct that you described extrinsic cancer of the larynx in the old terminology of years ago as being cancer within the larynx cavity?

A. Yes, sir.

Q. And was my understanding of your testimony correct that the old classification of extrinsic cancer meant cancer outside of the larynx?

A. Yes, sir.

MR. FIELD: And including the pyriform fossa, he said.

Q. (By Mr. Hardy) Now, may I conduct my examination?

MR. FIELD: But I think you ought to quote him accurately if you are going to do it.

MR. HARDY: Your Honor, may I conduct my examination--

MR. FIELD: I object because he didn't quote him accurately.

MR. HARDY: He never interrupts me, he says.

MR. FIELD: I am going to now, Mr. Hardy, I am going to change my style.

THE COURT: I think he answered the question.

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MR. HARDY: That is correct, and I want to ask, unless counsel has an objection--I never got up except to make an objection--if he hasn't got an objection I want him to keep his seat and keep quiet. If he has an objection I will defer to his right to make it, as he should to mine.

- Q. (By Mr. Hardy) Now I will restate that question, Doctor. Is it correct, did I understand your testimony correctly that the definition of extrinsic meant cancer outside the inside of the larynx?
- A. Yes, sir, that is correct.
- Q. And that area would include cancer of the pyriform fossa?
- A. Yes, sir.
- Q. It would influence cancer of the entire hypopharynx?
- A. Yes, sir.
- Q. And that would include cancer of the epiglottis?
- A. Yes, sir.
- Q. And that would include cancer of the postericoid area?
- A. Yes, sir.
- Q. And the postericoid area is the area around behind the larynx and outside?
- A. It is.
- Q. And would it include, Doctor, all the area of the throat that was not inside the larynx?
- A. It would include all of the area that is not included

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7-1-89w

in the cavity of the larynx.

Q. In the cavity of the larynx. All right. Now, Doctor, in your cross-examination you made the trip with Mr. Field from the area of the pyriform fossa up along the outside of the larynx and down into the larynx and on down into the bronchus, by his questioning, is that correct?

A. Yes.

Q. Is it or is it not true that cancer outside the larynx, from the standpoint of medical men, is considered to be hypopharyngeal cancer and not larynx cancer?

MR. FIELD: I object to that as leading and suggestive.

MR. HARDY: I said is it or is it not true.

MR. FIELD: That doesn't make any difference, you are leading him, and I am going to start objecting.

MR. HARDY: You have a right to object, Mr. Field.

MR. FIELD: Thank you, Judge Hardy.

THE COURT: Objection overruled.

Q. (By Mr. Hardy) All right. Now, do you want me to repeat the question?

A. Yes.

Q. I said is it or is it not true that cancer of the pyriform fossa, such as John Ross had, and I am referring now to

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21-90w

this picture that Mr. Field wouldn't let you refer to,  
the middle one, do I have my finger approximately on  
the area of this plaintiff's cancer?

- A. I would say yes, sir, approximately.
- Q. And in order to get inside the larynx, you either have  
to go through the wall or up and down, isn't that  
correct?
- A. Yes, that is true.

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Q All right. Now my question is, is cancer in that locality considered by any -- I shouldn't say "by any" -- considered by you or in your field as cancer of the larynx or cancer of the hypopharynx?

A Cancer of the hypopharynx.

Q All right. Now, Mr. Field asked you a great deal about Jackson and Jackson, as to who wrote what book, what portion of it. He referred to Jackson and Jackson's book, second edition, Diseases of the Nose, Throat and Ear, and he read to you under Etiology, which I take it that means causation, doesn't it?

A Yes, sir.

Q "Etiology," right under "Cancer of the Larynx". And that was the place from which he read that, "Irritation is certainly an etiologic factor and may be of many kinds, but alcohol, tobacco, and vocal abuse are among the more common forms. Heredity is a factor which is difficult to evaluate," and so forth.

Now, I want to ask you whether or not vocal abuse has anything at all to do with cancer of the pyriform fossa or is that with just regard to intrinsic cancer of the larynx?

A I think that he must have referred to cancer of the interior of the larynx.

Q Now, let me direct your attention to the same page, on

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which -- from which Mr. Field read, and I refer to the first complete-- second complete paragraph in the second column, and I ask you to read that.

A "Incidentally, tumors of the hypopharynx must be distinguished from tumors of the larynx and classified according to their own regional subdivision."

Q Now, let me ask you, then, the Jacksons and the Jacksons, and Chevalier, Sr., and Chevalier, Jr., about whom Mr. Field asked you, did they or did they not, whichever one of them wrote this, did they or did they not consider cancer of the hypopharynx, such as John Ross's cancer, that it must be distinguished from cancer of the larynx as you have just read from their book?

A I would interpret that as meaning that it has to be considered apart from cancer of the larynx.

Q Now I will ask you, Doctor, to state if it -- whether or not it is a fact that at no place in the book by Jackson and Jackson do they mention the subject of smoking as a causative factor of cancer of the hypopharynx or pyriform fossa?

A I don't believe they do.

MR. FIELD: Well, they don't mention it in the book, do they, Doctor?

MR. HARDY: Now, Your Honor --

MR. FIELD: They don't mention cancer of the

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pyriform fossa, do they?

THE WITNESS: No.

MR. HARDY: Is that an objection?

MR. FIELD: No.

MR. HARDY: Then why don't you keep still?

MR. FIELD: Well, I don't have to.

MR. HARDY: It just bubbles over.

MR. FIELD: The doctor answered the question, they don't mention cancer of the pyriform fossa.

THE COURT: Let's proceed with the case.

MR. HARDY: Your Honor, if I ever got up and said anything like that without making an objection, I wouldn't hear the last of it for a week.

Q (By Mr. Hardy) Now, to get this clear, after Jackson and Jackson say that hypopharynx must be considered separate and apart from cancer of the larynx, do you know anything in their book or in any of their books that indicates that smoking is connected with cancer of the hypopharynx?

A I don't know of anything.

Q Now, Doctor, I would like to direct your attention to this fine sketch that Mr. Field asked you about and to the -- the one on the right, the one that he constantly referred to and kept you away from the one in the middle, I will ask you to tell the jury if it is not -- whether or not it is correct that this one on the right is a view from

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above down.

A It is from above down, yes.

Q Sort of like looking at an automobile when you are up in an airplane, is that correct?

A Yes, sir.

Q All right. Now, do you know of any reason why, in considering the location of John Ross's cancer, do you know of any reason why that diagram used by Mr. Field can be as illustrative as the actual specimen itself or the one in the middle that gives you the side view?

A I don't know of any reason, no.

Q Is that the reason that you kept trying to use the middle one?

A Well --

Q And he wouldn't let you?

A I don't know.

Q All right. You come point out on the middle one where the pyriform fossa is and the location of this plaintiff's cancer.

MR. FIELD: Do you have to cover up the other one?

A The --

Q (By Mr. Hardy) Stand aside so the jury can see.

A The left side here (indicating) has had the mucous membrane or mucous covering denuded, as it is intended to

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show the vessels and nerves, so I can't very well locate it on that side. But if it were on the opposite side, it would be down about this level here (indicating), running downward in that sulcus or groove.

Q All right. And is that --

A It would be about right here (indicating) on that side.

Q And is that about the same relation to cancer of the inside of the larynx as cancer of the skin of your stomach is to cancer inside your stomach?

A Well, I am not certain whether I understand your question.

Q I am talking about the wall, the wall there.

A Oh, yes, sir.

Q Now, is that on the one side of the wall like cancer of the skin of your stomach would be, whereas cancer of your abdomen would be on the other side of the same wall?

A Yes, that is true. This is on the outer aspect or outer wall, and cancer of the vocal cord would be on the inner side, so that is identical, in a sense.

Q Now, Mr. Field asked you on cross-examination as to whether or not keratosis and leukoplakia were pre-cancerous changes, and you told him you couldn't say that they were, that you didn't have that view. Now I would like to ask you, just to clarify it for the jury, in the first place, do keratosis of these biological changes -- pathological changes that you were talking to Mr. Field about, do they

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ever occur in the pyriform fossa, in your whole experience?

A I have never seen any in the pyriform fossa.

Q All right. So what he is talking about there is the inside of the larynx cavity?

A One sees them in the inside of the larynx cavity, notably on the vocal cord.

Q Now, and do you consider that the presence of keratosis or leukoplakia is necessarily a forerunner or precursor of cancer?

A I don't believe so now.

Q All right. Now let me ask you, Doctor, whether or not it is a fact that in this man's larynx, inside it where all of the smoke goes through, whether or not there was any evidence from the hospital record, from any of the medical records, or from the photograph, that there was any keratosis or leukoplakia at all?

A There was no record of any in the records submitted.

Q So far as this man's records are concerned and his specimen, is the inside of the larynx cavity normal or not?

A It is reported as normal.

Q All right, you may take the witness stand again.

Now, on the subject of extrinsic and intrinsic, which I was questioning you about a moment ago, and in which you referred to the fact that extrinsic meant outside

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T22s91

of, is it a fair statement -- I am referring now to the testimony of Dr. Alton Ochsner -- it says that when Kennaway talks about pharyngeal cancer --

MR. FIELD: Wait a minute, I object to this as improper redirect examination and, furthermore, it is improper examination, period, when he starts talking about the testimony of Dr. Alton Ochsner. This isn't proper at all, Judge Gibson.

MR. HARDY: I will do it without reference to Dr. Ochsner's testimony.

MR. FIELD: Well, but I -- he is going to have to do it according to the rules, Judge.

THE COURT: Of course, it wouldn't be permissible to ask him to comment on Ochsner's testimony.

MR. HARDY: No, I am not going to ask him to comment.

MR. FIELD: That is what he did, started to do, there.

MR. HARDY: How do you know? You never let me finish a sentence.

MR. FIELD: Certainly not, because I don't want you to get the poison in. I just want to object to it.

THE COURT: The objection will be sustained.

Q (By Mr. Hardy) I will ask you whether or not it is true that you could also call cancer of the pyriform fossa

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extrinsic cancer of the stomach the same as you call it  
extrinsic cancer of the larynx, meaning outside of.

A Well, that would probably be a little too far away from  
the stomach to make an extrinsic one --

Q What do you call it?

A -- but it is still outside, yes, it is still outside.  
Extrinsic means outside, that is what it refers to.

Q Outside. So it would be extrinsic everything except the  
hypopharynx, is that correct?

A That is right.

Q All right. Now going to the article which Mr. Field  
read to you from with regard to Dr. Wynder, and in con-  
text I want to read to you the very next thing after he  
read you about tobacco and ask you if you agree. I want  
to read you the very next thing that he didn't read you.

Dr. Wynder's article of 1956:

"Alcohol. Heavy alcohol consumption is demon-  
strated as an important variable among larynx-cancer  
patients. This relationship is more marked for the  
extrinsic type of larynx cancer than for the intrinsic  
type. No corresponding association is demonstrable for  
cancer of the lung. The risk of developing larynx cancer  
increases only with the very heavy consumption of alcohol.  
The type of alcohol consumed is also of significance, a  
positive association being established only for whiskey or

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predominantly whiskey drinkers. The study does not contain enough wine drinkers to approximate a definitive conclusion in respect to its possible effects on larynx cancer."

Would you agree with that --

MR. FIELD: Aren't you going to read the rest of it?

MR. HARDY: You didn't.

MR. FIELD: No, but I say, you are in a different context. You complained about I didn't read the whole context, so I read it.

MR. HARDY: All right.

MR. FIELD: Read the next thing in the context.

THE COURT: Gentlemen, let's proceed.

MR. HARDY: Your Honor, may I ask that he let me conduct my own examination?

MR. FIELD: Yes, but you asked me to read the full context. I ask you to read the whole context on the relation of alcohol consumption to --

MR. HARDY: I read the entire paragraph. I took nothing out of context. You skipped two sentences in your paragraph.

MR. FIELD: I will read it on recross-examination.

MR. HARDY: Your Honor, I think I am entitled to some sort of protection from this sort of thing. Be

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didn't make an objection. I didn't take something out of context. I read the entire paragraph and I want to question the witness about it and I have that right.

THE COURT: You may proceed.

MR. FIELD: Go ahead.

MR. HARDY: All right.

Q (By Mr. Hardy) Now, do you agree with that statement?

A I do, as I consider alcohol as a definite suspect.

Q All right. And insofar as the next page of his article, under the subject of Nutrition —

MR. FIELD: Well, you are skipping, then. You are skipping now.

THE COURT: He may proceed. You can ask about it on recross.

MR. HARDY: I took nothing out of context. What I just read was the paragraph entitled "Alcohol". What I am now --

MR. FIELD: Go ahead, Mr. Hardy, that is all right --

MR. HARDY: -- reading is the paragraph entitled "Nutrition". The thing that I did not read is a separate paragraph entitled "Relationship of Tobacco to Alcohol Consumption". That is the part he is talking about.

Q (By Mr. Hardy) "Nutrition. We could not establish any

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differences in diet intake between the cancer and control groups. This, however, does not deny the possibility that dietary deficiencies may have existed. Diet histories are difficult to take and are quite unreliable unless present in the extremes.

"Patients who consume seven shots of whiskey daily or the equivalent in beer or wine are likely to have sub-clinical dietary deficiencies, such as those not infrequently found among alcoholics. It would be well worthwhile to study these patients from the laboratory point of view. Dietary deficiencies seem to be of greater significance in the development of extrinsic-larynx cancer in women, a subject to be discussed in a subsequent report."

Do you agree with that statement?

A Yes, sir.

Q All right. Now, doctor, Mr. Field started asking you such questions as does when a man marries or whether he was annulled or divorced have any bearing. I would like to give you a fair question in that area and ask for your opinion covering the same general subject matter that he did, but giving you the facts, the picture, rather than isolated items. For purposes of this question, and in light of your mentioning of constitutional factors, I would like to ask you to assume the following facts:

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That John Ross at the age of approximately 20 years went to California and was married to a first wife; that her name was Hazel Regina Menahan.

That he was later divorced from Hazel Regina Menahan by a divorce proceeding filed in 1922, in July 1922, with a divorce being granted in September 1926; that in between the time that he filed the divorce and the time that he secured the divorce he had a child by a woman he later married.

That with respect to those facts, Mr. Ross, at the late date of 1952, in sworn testimony testified in a case against the Public Service Company that he married his first wife in 1920.

That in this case, in sworn testimony in September 1960, he testified that he married his first wife in 1919, and that he didn't -- he never was married to a Hazel Regina. In other words, he completely forgot her name.

MR. FIELD: That isn't true. That just isn't -- I object to that --

MR. HARDY: All right --

MR. FIELD: -- because that just plain isn't true.

MR. HARDY: We will get John Ross's deposition.

MR. FIELD: That just isn't true. That is

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hopelessly false, maybe inadvertently, but just hopelessly false.

MR. HARDY: I want to put an end to his statement as to what is true and not true, for the reason that this morning we nailed one of those down completely, and I will just put one to rest for once and for all.

THE COURT: Do we have a copy of Ross's deposition?

THE CLERK: We don't have it.

MR. HARDY: Page 42 of John Ross's deposition. May I borrow your copy?

MR. FIELD: No. I want to look at it.

MR. HARDY: All right, you look at it on Page 42.

THE COURT: Mr. Clerk, don't we have a copy here?

THE CLERK: No, Your Honor.

MR. FIELD: Don't you have your copy?

MR. HARDY: My copy is at my office. I didn't realize that you were going to go into these matters with the doctors. You look at Page 42 and then let me have it.

MR. FIELD: Oh, no. No, no, I am not going to do that.

MR. HARDY: There is --

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THE COURT: Where is the copy, the Court's  
copy?

MR. HARDY: There is an original on file.

THE CLERK: There isn't.

MR. HARDY: Yes, there is. There is an original on file; there has to be.

If counsel refuses to let me use his copy --

THE COURT: Mr. Field, why don't you allow him to use the copy?

MR. FIELD: Well, yes, Judge, I will let him use the copy, but he is going to have to use it right, then, because, in the first place, at Page 38 he says that he was married to Jean Menahan, and then you jump over to Page 42 and talk about Hazel Regina and tried to trick him on the fact that he didn't know her first name. Now, that doesn't have the remotest kind of bearing, but if he is going to use my copy, then he is going to do it fairly and start with Page 38 where you asked him what was her name and he said Jean Menahan.

MR. HARDY: Your Honor --

MR. FIELD: And then you tried to trick him on Page 42 because he didn't remember his first wife's first name.

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MR. HARDY: Your Honor, I am either going to use his copy the way it is properly to be used without any coaching by him, or go get my own copy.

MR. FIELD: You can use it but use it properly.

THE COURT: You may ~~use~~ it.

MR. FIELD: Now we want to put Mr. Field's claim as to falsehood forever at rest. Deposition taken September 23, 1962, page 42:

"QUESTION: Were you ever married to a Hazel Regina or Regina Ross?

"ANSWER: Hazel Regina?

"QUESTION: Yes, R-e-g-i-n-a. I understood this is all your marriages, but I had also understood that you were married at one time to a Hazel Regina Ross.

"ANSWER: What was her name?

"QUESTION: I don't know what her maiden name was. I don't know what her maiden name was but I understood you were married to her, maybe my information is wrong.

"ANSWER: I don't know where you got that information. But I wasn't."

MR. FIELD: I submit to you that when the witness testified from the witness stand--he is going back to his deposition--when the witness testified from

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the witness stand he testified that he didn't know his first wife's first name or didn't recall it, but that her name was Jean Menahan and he simply answered that her name was Jean Regina Menahan or Regina Jean Menahan, and on those areas of knowing a man's case couldn't be permitted to end by this lawyer's trick.

THE COURT: Let's take this in order. Proceed, gentlemen. You are not getting very far with this type of testimony.

MR. HARDY: That is in the same category as the thing I proved him wrong on this morning.

Q. (By Mr. Hardy) Now continuing with my question, do you remember approximately where we are, Doctor, on the things I have asked you to assume?

A. Well, fairly so.

Q. All right. Now, he testified that in 1952 he testified his marriage was in 1920. In 1960 he testified the marriage was in 1919. In this courtroom he testified it was 1920, and he testified on his deposition that he was married, in September 1960, that he was married to Jean Mehanan and that he never heard of any Hazel Regina and was never married to a Hazel Regina.

In this courtroom from the witness stand he testified that he was married to Regina Ross, Regina Menahan Ross, and the dates indicate it. He testified--

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assume further that he testified in his deposition in 1952 that that marriage lasted only two months, and was annulled. Assume further that he testified in his deposition in September 1960 that that marriage lasted only about six months and was annulled, and that it was annulled in Kansas City, and that he was represented by Clif Langsdale.

Assume further, Doctor, that the actual facts were that he was married in California on March 19, 1921, and that instead of lasting two months or six months the actual facts showed that he wasn't divorced until 1926, a year and a half after the birth of his daughter by his second wife.

Assume further, Doctor, that during this period of time that Mr. Ross was drinking bootleg whiskey, an indeterminate amount, that he married in 1927 his second wife named Geraldine.

Assume further that in 1952 he testified that he was married to Geraldine in 1925. That was in his deposition in '52.

Assume further that in his deposition in 1960 he testified that he was married to Geraldine in 1960--I mean 1925--

MR. FIELD: Even the attorney is getting it all confused now.

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MR. HARDY: Thank you for your help.

- Q. (By Mr. Hardy) That he testified in his 1960 deposition that he was married to her in 1925.

Assume further that in his 1952 deposition he testified that he was married to her for ten years--this is the second wife--and his marriage was terminated by her death.

Assume further that in 1952--strike that. Assume that in his 1960 deposition he testified that he was married to her in 1925, that he was divorced from her in California in 1926, and that she died about 1935.

Assume further that in this case, in this courtroom, he identified his own sworn affidavit, which showed that instead of his filing divorce in California from this second wife, he had actually filed a divorce petition in 1953 in Kansas City, Missouri, and that in that divorce petition he had made under oath he had said that he had married this woman in March of 1925 and separated from her in May of 1925, and that from that time on she had deserted him and he didn't know where she was.

Now, assume further that there was also introduced in court a marriage certificate that showed he wasn't married, as he had said under oath, that he was actually married in 1927 to Geraldine, his second

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wife.

Assume further that he only lived with Geraldine a month and six days, contrary to that ten years, contrary to his statement in the 1952 divorce proceeding, and that he was only with her a month and six days when they separated.

Assume further that during all of this period of time, and in all of these depositions, that he was in California from roughly 1921, back here for a short time and back out there again in the late 1920's, that when asked under oath on his deposition as to the jobs and his places of residence, he forgot about at least three of them, of his jobs, and at least two of his places of residence.

Assume further that this man came back to Kansas City in the late 1920's and that--it was during some of this early life, as Mr. Field pointed out, that he had had this gonorrhea that you said, standing alone, wouldn't mean anything, that when he got back here he went to drinking or continued drinking, and that he continued drinking whiskey, both Scotch and Bourbon, bootleg whiskey until it became legal and then he continued drinking whiskey, that he had three arrests and convictions for being drunk in public over a period from 1931 to 1946, that in addition he had another

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arrest and conviction for drunken driving, that he had an additional or fifth occasion when he admitted being in an accident in a car he was not driving, but when he had had at least ten or twelve highballs, that he continued his drinking to such a point that in 1942 he thought he might have a problem, so he became a member of Alcoholics Anonymous, and that after attending the Alcoholics Anonymous meetings for a year he decided he didn't have a problem and resumed his drinking.

Now, assume that from the time he returned to Kansas City in the late 1920's until he was married in 1945, that he moved about frequently, lived in seven or eight different places, that he was single at that time, and that the only thing from that period of his life back in the early 1930's that he remembers is the content of the cigarette ads.

I will then ask you to assume that when he went to the Mayo Clinic he had a one plus positive Kline test, that before that time he had dental infections in his teeth, most of them had been removed, the remaining ones were removed later, that on the Mayo hospital records it showed that he had had in the past jaundice, pneumonia, scarletina, and that it showed on the Mayo hospital records that he reported himself as a moderate drinker.

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I will ask you, Doctor, whether or not those assumed facts enable you to have any opinion as to whether or not this man had any constitutional factor that might be of significance in causing his cancer of the pyriform fossa, at least as a suspect?

MR. FIELD: Judge Gibson, I object to it because the question is hopelessly argumentative, it does not state the facts accurately, and improperly and prejudicially refers to matters that were only germane because they were impeachment and were impeachment on collateral matters, if that--

THE COURT: What facts are improperly stated?

MR. FIELD: Well, for example, the fact that he was arrested three times for being drunk in public. That isn't true.

MR. HARDY: I can give the dates.

MR. FIELD: I am talking to the Court now. He was arrested once for drunken and careless driving, and two other times he was with a friend and when he was in the restaurant, that is all. That was misstated. But beyond that the question is hopelessly confusing and argumentative, going into the matters of what he testified in a deposition in a case with the Public Service Company, what he testified to in a deposition in this case. Those matters aren't merely immaterial,

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but they are hopelessly prejudicial because they are again impeachment on a collateral matter, and it is a question of fairness, shouldn't be asked.

Now, finally, his question in and of itself invites speculation because he doesn't ask him for any medical probability at all, he merely asks him on a basis of suspect or suspicion, and a hypothetical question can't test that area on direct examination at all. It has to be on the basis of some probability. Here speculation or suspicion can't be the ground of a hypothetical question, so the whole purpose of this question, we insist, was to present an argumentative and inflammatory matter, argument on a collateral matter and at the very end he asks about suspects. Hypothetical questions can't be on that basis, and for those reasons I object to the question and state it should not be answered.

MR. HARDY: If the Court please, I would like to state that the purpose of this offer--we had no idea we would have to go into this with the doctor--the purpose is that Mr. Field, chuckling along, asked the doctor some of these isolated facts, and I asked him at the time to put all the facts in context so the doctor could testify, and he refused to do it, he wanted to ask him if a marriage or an annulment had anything

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to do with his cancer. Now I want to ask him whether or not in fairness, piecing all of those things together, and I will accept the suggestion with regard to the dates by supplying the definite dates from the police record that the man admitted, if that is desired.

THE COURT: I think the question may be asked. There are a lot of collateral matters in there. Of course it bears upon your cross-examination, cross-examining questions relating to these single factors-- and he should state of course whether there is a reasonable medical probability.

MR. FIELD: But he hasn't done that.

MR. HARDY: He asked if these isolated things could have had anything to do with his cancer. Now I am asking whether the whole picture could have had anything to do with his cancer. Our position is that no one can say that anything caused a cancer to a reasonable medical probability, and we are not endeavoring to prove his case/<sup>or</sup> to prove another cause. I am asking him now--he mentioned on cross-examination possible constitutional factors. I have given him the complete picture and I now want to ask him whether or not these isolated things that Mr. Field picked out and handed him and laughed and said, "That couldn't have anything to do with it?" now I want to ask him

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if the whole picture, put them together, had anything to do with it or could have anything to do with it.

MR. FIELD: Judge, he hasn't given him the whole picture, and he hasn't done it fairly. The doctor wouldn't know about these things. He hasn't done it fairly by any means. He has left with him the impression, by quoting from one deposition to another, matters that the doctor could only have a confused picture on.

Now, he finally puts onto it, however, an improper request, and that is that he talk in terms of mere suspicion or what he suspects, and it can't be that speculative. He has to cast his question in the form of medical probability, and if he can't, it doesn't have any relevance and would be highly improper, regardless of what was gone into on cross-examination.

THE COURT: As I understand it, what he wants to do mainly is to take all of these factors that you mentioned singly, grouping them together, and ask if they would have any bearing on this cancer.

MR. HARDY: Right.

MR. FIELD: But he hasn't done that, because I didn't mention this great mass of things about in the depositions, contradictions in the depositions. I asked him about the fact that he was mistaken on--if his

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attorneys were mistaken on the date of the death of the parents, and things of that character. Then I did ask the doctor, as the Court will remember, some 16 things that I enumerated, individually would they make any difference, then I asked him the question, collectively would they make any difference and he answered no, they wouldn't.

MR. HARDY: Must have been another proceeding.

THE COURT: I don't think he said "No, they wouldn't."

MR. FIELD: Now, I would have no objection-- he says it must have been another proceeding, but I know I asked him that, collectively or individually, and I will ask the doctor right now--

MR. HARDY: No, you won't.

MR. FIELD: Wait a minute--preliminary to an objection.

Did I ask you such a question, Doctor, if the 16 things I listed either individually or collectively would make one whit of difference? Did I ask you such a question?

- A. Frankly, I don't recall. My answer to a number of your questions was, as an isolated happening, I didn't believe it would make any difference.

MR. FIELD: Now, Judge, I want to object to it

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for the basic reason that the redirect examination has to be on the basis of reasonable medical probability when he asks a hypothetical question that purports to cover all the facts of the case, and that is what he claims it does.

MR. HARDY: I am not trying to prove what caused this cancer, Your Honor. When I specifically bring up the question--and how many times did he ask about suspects or suspicion on his cross-examination?

THE COURT: Gentlemen, I don't think we are getting along with the case. The objection is overruled.

- Q. (By Mr. Hardy) Now, Doctor, do you remember the question? I mean at the end? Would that have any bearing?
- A. I do have an opinion. I believe that was your question.
- Q. Yes.
- A. I do have an opinion, and that is I believe that when one takes these things together, it suggests a certain degree of emotional instability, which I would list under constitutional factors and under heredity and constitutional factors, and those taken together have been considered as suspect. As suspect.
- Q. Now, you stated on cross-examination, in reply to a question by Mr. Field that you considered, when he asked you if you wouldn't eliminate alcohol with regard

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to cancer of the larynx, and you said yes, but not as the cause of cancer of the pyriform fossa you wouldn't eliminate it. Now I want to ask you whether or not alcohol and resulting nutritional deficiencies are high or low on your list of suspects for the pyriform fossa, where it goes over, each time it goes down.

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- A Well, in my personal experience I felt that that was probably a higher suspect than anything else.
- Q All right.
- A Among my suspects.
- Q Now, insofar as the cross-examination with regard to your smoking, it has been testified here in this case by a previous medical witness that the reason for your views is because you were a heavy cigarette smoker. I want to ask you to tell the jury, in your entire lifetime, about how many cigarettes have you smoked in your whole lifetime?
- A Well, I haven't smoked many. In fact, I am convinced that I haven't smoked as many as would appear in a carton of cigarettes. A very occasional cigarette. I am a pipe and cigar smoker.
- Q So if that is true, is your opinion in this area colored in any way by the fact that you have smoked almost a carton of cigarettes in your lifetime?
- A Well, no, sir, my opinion is not colored by that.
- Q Now, with regard to Mr. Field's questioning you concerning your sucking on a cigarette and getting the smoke eddying and whirling, I would like to ask you whether or not it is a fact that before you inhale, the smoke is confined to your mouth area, in your opinion.
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- MR. FIELD: Do you inhale -- preliminary to

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objection -- do you inhale pipes or cigars?

THE WITNESS: I do not.

MR. FIELD: And the extent of your smoking experience has only been a carton and you don't inhale those?

THE WITNESS: No.

MR. FIELD: Well, I object to that, Judge. He hardly would have an opinion, even practically speaking, or be able to form an opinion if he --

MR. HARDY: He sure questioned him a long time about it --

MR. FIELD: -- has smoked about a carton without inhaling it.

THE COURT: Well, he is a medical doctor. If he has an opinion --

MR. FIELD: Well, I suppose that is right, Judge. I will withdraw it.

- Q (By Mr. Hardy) Is it confined to your mouth or does it get down in your larynx before you ever inhale?
- A It was always my feeling that one smoking, one who inhales, starts inhaling fairly early in the act. Now, as I stated before, I thought that if it was contained in the mouth, and it would have to be locked in there, unless breathing was absolutely inhibited, then there would be no air getting into the pharynx at all. or the back part

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of the throat, back part of the throat.

Q All right, Doctor. Now, when it does get far enough back in the process of inhaling, when it gets far enough back to reach the larynx, is that larynx open with the pyriform fossa obliterated or is that larynx closed?

A The larynx ought to be open and the fossa should be closed.

Q All right. And in order to get down into the fossa where this cancer occurred, the smoke would have to go past the wall where you said it was like the skin, like your hands together (demonstrating), of the wall of the throat, past the mouth of the larynx and on down in this area?

MR. FIELD: I object to that as leading and suggestive, Your Honor, and I am going to continue to object on leading and suggestive questions.

THE COURT: Objection sustained.

MR. HARDY: All right.

Q (By Mr. Hardy) State, Doctor, whether or not in order for smoke to get into the pyriform fossa it is necessary for it to get past the closed -- I should say the open flaps of the larynx that are against the walls of the throat?

A With the larynx open, it would not be able to get into the pyriform sinus, if that is what you mean.

Q That is my point. And if the larynx is open, state whether or not it would go in the larynx and be inhaled?

A If the larynx is open, it will go down into the larynx.

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Q Now, state whether or not it is true that when you are not phonating, talking, or swallowing, normal rest, the larynx is open.

A The larynx is open at rest.

Q So that at rest, whether we are sucking on a cigarette or what we are doing, the larynx is open?

MR. FIELD: I object to that as leading and suggestive, Your Honor.

MR. HARDY: I will rephrase the question.

MR. FIELD: I am going to hold you to the line now, Mr. Hardy.

MR. HARDY: Oh, yes, I know you are tough.

MR. FIELD: I am not tough. I want you to play according to the rules.

Q (By Mr. Hardy) So I will ask you, Doctor, when you are not talking or phonating, as we say, and you are not swallowing, but I am just standing here and I quit talking, is my larynx open, at rest?

A It is open.

Q All right. So when I put my finger -- you said that when you want to see down into the pyriform fossa you have to, in effect, close up the larynx by bringing the cord to the midline?

A Yes, sir.

Q All right. Now, in order to bring the cords to the

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midline and close the larynx so that the otolaryngologist can see the pyriform fossa, state whether or not it is necessary to move the larynx out of its normal position.

A The larynx usually is elevated as we attempt to pitch our voices higher, so that with a very low tone the larynx moves -- the larynx is not elevated particularly, but when you get to a very high EEE, as high as you can, the larynx is elevated, as are the arytenoids.

Q So that if you weren't swallowing, in order to take smoke in your mouth and to get it in the pyriform fossa before it went into the larynx, state whether or not it would be necessary to suck on the cigarette and say EEEE, is that a fair statement, in order to move your larynx out of the way?

A The moment you said EEE, of course, all the --

Q Smoke came back out?

A -- air would be blown out --

Q Right.

A -- through the mouth.

Q Well, what I am getting at, Doctor, is there any way to open -- to close the larynx and open the pyriform fossa in a normal individual except by moving the larynx up by saying EEEE or by swallowing and thus moving the larynx up by swallowing when it moves the same way? Is there any way to open it other than that?

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- A You mean to open it or close it?
- Q I mean to close the larynx and open the pyriform fossa.
- A Yes. Well, those two ways. And, of course, when you cough. When you cough, you bring the vocal cords together, too, so that that also would bring the vocal cords together and open the pyriform sinuses.
- Q So if you are coughing, you open the pyriform sinus?
- A And close the larynx.
- Q That is when you bolt it out, is that right?
- A When you are coughing you bring the vocal cords together --
- Q Right --
- A -- and at the same time the pyriform sinuses open.
- Q So when coughing or phonating, saying a high EEE, or swallowing, is the only way that the pyriform fossa is open?
- A That is correct.
- Q All right. Now, Doctor, you were asked the question about tobacco in saliva -- oh, strike that. Before I get to that. With regard to this matter of inhalation, can you tell the jury, in the normal individual, in one minute approximately how many times you breathe in?
- A The respiratory rate is 16 to 18 in the normal adult.
- Q And how many times do you breathe out?
- A Well, the same number of times.
- Q So is it, then, correct that you breathe in and out from

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32 to 36 times?

A Thirty-two, there -- yes, 32 to 36 times in a minute, depending upon what the respiratory rate is.

Q So that would be a little more than once every two seconds you breathe in and out, is that correct?

A Yes, sir.

Q So that even if there was some place for smoke to eddy and whirl, what would be the maximum length of time it could eddy or whirl before it was blown in or out, go into the larynx or out of the larynx?

A Well, it wouldn't be there for more than -- not more than a second.

Q All right, sir. Now let me mention, Doctor, in connection with the next question, that the Mayo Clinic records that you have examined and the testimony of Dr. Parkhill indicates that there was no foreign substance in the tissue of the cancer.

MR. FIELD: I object to that about the testimony of Dr. Parkhill as an improper redirect examination. It would be improper examination at any time, about the testimony of Dr. Parkhill.

MR. HARDY: Just preliminary to my question, Your Honor.

MR. FIELD: Let the Court rule on it.

THE COURT: Objection sustained.

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Q I will ask you this, Doctor, that if any particles of any kind were deposited in the pyriform fossa, state whether or not you would expect to be able to find some of the particles in any growth that later resulted.

A There is a possibility that materials might be deposited over that rough surface of the growth, that is a possibility, because it is irregular, little crypts in it, little clefts in it.

Q If none were there would that indicate or not indicate that none were deposited?

A I would say that it wouldn't support either.

MR. FIELD: Either.

Q (By Mr. Hardy) Wouldn't support it. All right. Now, Doctor, with regard to the saliva, I will ask you to tell the jury whether or not it is true that saliva, as you swallow it all day long, goes right over the pyriform fossa.

A Yes, sir, it goes down into the pyriform fossa.

Q State whether or not that has an effect of constantly washing that tissue.

A Well, that is one of the functions of saliva, is to provide a cleansing effect.

Q And how much saliva does the average person manufacture and swallow in the course of a day?

A It is said to be one pint.

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Q So that that would mean that over the pyriform fossa on one side or the other, or divided, that a pint of liquid saliva passes each day?

A Yes, sir; approximately that, yes, sir.

Q Now, with regard to Mr. Field's question of you concerning the production of skin cancers by painting heavy concentrates of tobacco tar on the backs of mice, I want to question you about that now. State whether or not it is true that some skin cancers have been produced on the backs of mice by the painting of glucose, sugar water?

A I know of no—

Q You don't know of that?

A —work in that field.

Q Do you know of any work in the egg-white and egg-yolk field?

A No, I don't.

Q Do you know of the type of strain of mice that is used as to their susceptibility to spontaneous tumors?

A Well, I know that there is some susceptibility, but I am not familiar with it. I am not interested in it, since I don't do the work.

Q I want to ask you, Doctor, in that same regard, Do you purport to be an expert in animal experimentation?

A No, I am not.

MR. HARDY: I believe that is all.

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## RECORD-EXAMINATION

BY MR. FIELD:

Q Doctor, when you say you don't purport to be an expert in animal experimentation, you don't purport to be an expert in causes of cancer, either, do you?

A Not in the same sense. I do keep up fairly well with the literature of the work of others, but I do none of the work myself.

Q And you don't claim to be an expert in the cause of cancer, do you?

A No, I do not.

Q No, I thought not. Now, I want to read to you from this publication, the parts Mr. Hardy didn't read. Following on from what he read on alcohol, at page 105. This is the one of Dr. Wynder, Bross, and Dr. Day, "A Study of Environmental Factors in Cancer of the Larynx", where he talks about a survey demonstrating the "clear association between tobacco smoking and cancer of the larynx, both of the intrinsic and extrinsic types."

"Relationship of Tobacco to Alcohol Consumption.  
This study has shown that tobacco as well as alcohol, increases the risk of developing cancer of the larynx. It remains to be shown whether both of these factors can initiate cancer or whether one of them acts only

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as a promoting agent. The risk of larynx cancer rises proportionally with the amount of tobacco consumed. Such a proportional increase is not noted for alcohol consumption. The Indian data show smoking and chewing to be of etiological importance in the absence of significant alcohol consumption. Present data conform to the hypothesis that tobacco acts as an initiator and alcohol acts as a promoter."

Do you agree with that, that that is reasonable in its context?

A Well, I—I have never—in my opinion, been able to separate those two in the causation of laryngeal cancer.

Q I thought that you discarded alcohol some time ago.

A I do, yes. But I can't see where the alcohol would be a promoter, as he indicated. I must confess I don't agree with that.

Q Well, but you don't even believe that alcohol has anything to do with laryngeal cancer, do you?

A That is true. I say I don't see where it could be a promoter, because I don't believe it is even a suspect in laryngeal cancer.

Q But you certainly believe tobacco is a suspect in laryngeal cancer?

A Yes.

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MR. FIELD: That is all.

## REDIRECT EXAMINATION

BY MR. HARDY:

Q One further question. Mr. Field asked you if you claim to be an expert. I will ask you whether or not you claim to be as expert in the field of cancer causation of the pyriform fossa as any other clinicians in the country.

MR. FIELD: I object to that as highly improper.

THE COURT: Sustained.

Q (By Mr. Hardy) I will ask you what you mean by saying that you don't claim to be an expert. Explain that to the jury.

A Well--

MR. FIELD: I object--

MR. HARDY: I am certainly entitled to ask the question.

MR. FIELD: That is cross-examination of his own witness.

THE COURT: He is asking for an explanation of the answer. He may proceed.

A I am not an expert in the sense that I have done any experimental work in the field of cancer; therefore, I am not in a position to set forth any views on the bases of what has happened in my laboratory. But I do believe I am qualified reasonably well on the basis of

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clinical association with the subject and keeping abreast of the literature in a reasonable manner. I think I am reasonably expert in that field.

Q (By Mr. Hardy) Do you feel that your experience is such to enable you to properly state the opinions you have stated in this court?

A I think so.

MR. HARDY: That is all.

MR. FIELD: That is all.

THE COURT: Are you through with the witness?

MR. HARDY: May Dr. Clerf be excused?

MR. FIELD: Yes.

THE COURT: You may be excused.

(Witness excused)

THE COURT: Members of the jury, we will recess until 9:30 tomorrow morning. Again the Court cautions you to not discuss the case with anyone, amongst yourselves, read any articles about it or listen to any broadcasts or telecasts there might be of the case.

(Adjournment)

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